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Flight Standardization Board (FSB) Report

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Airbus A318/A319/A320/A321/A330/A340

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RECORD OF REVISIONS

Revision Number	Sections	Date
0 (Original)		10/02/1996
1		04/27/2001
2		10/26/2005
3		05/30/2012
4	1, 6, App 1	07/31/2013
5	5, 6, App 1	06/10/2016

HIGHLIGHTS OF CHANGES:

Revision 1:

Revision 1 includes conditions associated with cross crew qualification (CCQ) and mixed fleet flying (MFF). CCQ & MFF apply AC 120-53 provisions to transition programs and mixed fleet flying among A320, A330, and A340 aircraft.

Revision 2:

Revision 2 addresses a broader spectrum of changes and also updates the report to include the A318 and the A340-500/600.

Revision 3:

Revision 3 adds the A330-200F.

The report format has also been transposed into a standard format, which results in some different wording and paragraph structures; however, the scope and meaning of the report is the same as Revision 2 except for the applicable stated changes.

Revision 4:

Adds “Sharklet” Modification. (para 1.2)
Modifies no flap testing requirements in aircraft. (para 6.1.2)
Adds note to Appendix 1, Table 2 for “Sharklet” levels of difference.
Previously unidentified acronyms added to para. 1.8.

Revision 5:

Adds “A320 neo” Modification. (para 1.2)
Adds note to Appendix 1, Table 2 for “A320neo” levels of difference.
Previously unidentified acronyms added to para. 1.8.
Updates statements concerning requirements for training and checking of stalls and steep turns in sections 5.2.2.1 and 6.1.1.
Modifies key terminology throughout.
Updates AQP reference.
Text and format changes for Section 508 of the Rehabilitation Act of 1973 throughout document.

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1. PURPOSE AND APPLICABILITY

- 1.1 This report specifies master training, checking, and currency requirements applicable to crews operating A320 (A318, A319, A320, A321 are all related aircraft hereafter referred to as A320), A330, and A340 aircraft operated under pertinent CFR. Provisions of this report apply only to the A320, A330, and A340 aircraft and:
- a) Define pilot “type rating” requirements assigned to the A320, A330, and A340.
 - b) Describe any unique requirement applicable to initial, transition, upgrade, or recurrent training.
 - c) Describe “Master Differences Requirements (MDR)” for flight crews requiring differences qualification between all related A320, A330, and A340 aircraft for mixed fleet flying or transition.
 - d) Provide examples of acceptable “Operator Difference Requirements (ODR)” tables between all related A320, A330, and A340 aircraft to accommodate the provisions of Cross Crew Qualification (CCQ) and Mixed Fleet Flying (MFF).
 - e) Describe acceptable training program and training device characteristics when necessary to establish compliance with applicable MDRs.
 - f) Identify checking and currency standards to be administered by the FAA or operators.
 - g) Provide a listing of regulatory compliance status (compliance checklist) for the pertinent CFR, Advisory Circulars, and other operationally related criteria that was reviewed and evaluated by the Aircraft Evaluation Group (AEG).
 - h) Do not address MDRs for the A380 aircraft. For a description of MDRs for crews requiring differences qualification for transition between the A320, A330, A340 aircraft, and the A380 related aircraft and/or mixed fleet flying, refer to the current A380 FSB Report.
- 1.2 This report addresses all A320, A330, and A340 related aircraft, as specified in the relevant FAA Type Certificate Data Sheets (TCDS). This includes those A318, A319, and A320 aircraft with Modification 160500 (Sharklets) and A321 aircraft with Modification 160023 (Sharklets). This includes those A320 aircraft with Modification 161000 (PW-(A320-271n models) and those equipped with Modification 161003 (CFM-(A320-251n models).
- 1.3 The provisions of this FSB report are effective until amended, superseded, or withdrawn by subsequent revisions to this FSB report.

- 1.4 Determinations made in this report are based on the evaluations of specific A320, A330, and A340 aircraft models equipped in a given configuration and in accordance with current regulations and guidance. Modifications and upgrades made to the models described herein, or introduction of new related aircraft, may require amendment of the findings in this report. The FSB reserves responsibility/authority to re-evaluate and modify sections of this report based on new or revised Advisory Circular material or the pertinent CFR, aircraft operating experience, or the testing of new or modified aircraft under the provisions of AC 120-53, as revised.
- 1.5 Differences between this FSB report and an operator's proposed training, checking, and currency requirements under an AQP must be justified and documented as part of the applicant's AQP approval process. Program approvals under AQP need to ensure the basic provisions and requirements of this report have been addressed and, where necessary, coordination with the appropriate Flight Standardization Board has been completed.
- 1.6 Terminology:
- a) The term "must" is used in this FSB report and certain MDR footnotes, even though it is recognized that this report (as well as AC 120-53, as revised, on which it is based) provides one acceptable means, but not necessarily the only means, of compliance with the pertinent CFR requirements. This terminology acknowledges the need for operators to fully comply with this FSB report and MDR and ODR provisions if AC 120-53, as revised, is to be used by the operator as the means of complying with the pertinent CFR. Operators who choose this method must comply with each applicable MDR provision, including the footnotes.
 - b) The term "Cross Crew Qualification" (CCQ) is used in this report to outline the differences training program from a given base aircraft to a specific related aircraft. The term "Standard Program", as applied in this report, refers to the full transition program for a given aircraft type.
- 1.7 This Report Includes:
- a) Minimum requirements for approval by FAA field offices, (e.g., MDRs, Type Rating designations, etc.),
 - b) General advisory information which may be approved for an operator (e.g., MDR footnotes, acceptable ODR tables), and
 - c) Information which is used to facilitate FAA review of an aircraft type or related aircraft that is proposed for use by an operator (e.g., compliance checklist).

Various sections of this report are qualified as to whether compliance is required (considering the provisions of FAA Advisory Circular 120-53, as revised) or is advisory in nature.

1.8 Relevant Acronyms:

2PC	Two Person Crew
A.I.M.	Aircrew Integrated Management
A/C	Air Conditioning
A/THR	Auto Thrust
AC	Advisory Circular
AD	Airworthiness Directive
ADF	Automatic Direction Finder
ADR	Air Data Reference
AEG	Aircraft Evaluation Group
AFM	Aircraft Flight Manual
AFS	Auto Flight System
AGL	Above Ground Level
ALT	Altitude
ANP	Actual Navigation Performance
APPR	Approach
APU	Auxiliary Power Unit
AQP	Advanced Qualification Program
ATC	Air Traffic Control
ATPC	Airline Transport Pilot Check
BSCU	Braking Steering Control Unit
CAPT	Captain
CAT	Category
CBT	Computer Based Training
CCOM	Cabin Crew Operation Manual
CCQ	Cross Crew Qualification
CFIT	Controlled Flight Into Terrain
CFR	Code of Federal Regulations
CHDO	Certificate-Holding District Office
Ckg	Checking
CM1	Crew Member One
CM2	Crew Member Two
CMS	Centralized Maintenance System
CNS	Communication, Navigation and Surveillance
Cond	Conditioning
CPDLC	Controller-Pilot Data Link Communication
CPIP	Continuous Product Improvement Package
CRM	Cockpit Resource Management
Ctl	Controls
DA(H)	Decision Altitude (Height)
DMC	Display Management Computer
DME	Distance Measuring Equipment
DU	Display Unit
ECAM	Electronic Centralized Aircraft Monitoring

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EFIS	Electronic Flight Instrumentation System
EGPWS	Enhanced Ground Proximity Warning System
EIS	Electronic Instruments System
ELEC	Electrical
Emerg	Emergency
Eng	Engine
ETOPS	Extended Operations
Evac	Evacuation
EVAL	Evaluation
FAA	Federal Aviation Administration
FADEC	Full Authority Digital Engine Control System
FANS	Future Air Navigation System
FBS	Fixed Base Simulator
FBW	Fly By Wire
FCOM	Flight Crew Operating Manual
FCTM	Flight Crew Training Manual
FCU	Flight Control Unit
FFS	Full Flight Simulator
FLS	Fms Landing System
Flt	Flight
FMA	Flight Mode Annunciator
FMGC	Flight Management Guidance Envelope Computer
FMGS	Flight Management Guidance Envelope System
FMS	Flight Management System
FO	First Officer
FOEB	Flight Operations Evaluation Board
FPV	Flight Path Vector
FSB	Flight Standardization Board
FTD	Flight Training Device
GPWS	Ground Proximity Warning System
HBAT	Handbook Bulletin for Air Transportation
HYD	Hydraulic
IAW	In Accordance With
IFR	Instrument Flight Rules
ILS	Instrument Landing System
IRS	Inertial Reference System
Ldg	Landing
LGCIU	Landing Gear Control Interface Unit
LOE	Line Operational Evaluation
LOFT	Line Oriented Flight Training
MAG	Magnetic
Mag	Magnetic
MAP	Missed Approach Point
MCDU	Multifunction Control and Display Unit
MDA(H)	Minimum Descent Altitude (Height)
MDCC	Main Deck Cargo Compartment

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MDR	Master Differences Requirements
MEL	Minimum Equipment List
MFF	Mixed Fleet Flying
MLS	Microwave Landing System
MMEL	Master Minimum Equipment List
MNPS	Minimum Navigation Performance Specifications
MMR	Multi-Mode Receiver
MTOW	Maximum Take-Off Weight
NAS	National Airspace System
NAV	Navigation
ND	Navigation Display
NDB	Non Directional Beacon
NEO	New Engine Option
NSP	National Simulator Program
ODR	Operator Difference Requirements
OE	Operating Experience
OEB	Operations Engineering Bulletin
PBN	Performance Based Navigation
Perf	Performance
PF	Pilot Flying
PFD	Primary Flight Display
PIC	Pilot in Command
PIO	Pilot Induced Oscillation
PNF	Pilot Not Flying
POI	Principal Operations Inspector
Press	Pressurization
Proc	Procedure
PTS	Practical Test Standards
Rconfig	Reconfiguration
RNAV	Area Navigation
RNP	Required Navigation Performance
RTO	Rejected Take Off
SFAR	Special Federal Aviation Regulation
SFCC	Slat/Flap Control Computer
SIC	Second in Command
SID	Standard Instrument Departure
SRS	Speed Reference System
STAR	Standard Terminal Arrival
Sys	System
T.O.	Take Off
TBD	To Be Determined
TCAS	Traffic Alert and Collision Avoidance System
TCDS	Type Certificate Data Sheet
Tng	Training
V1	Decision Speed
VACBI	Visual and Computer Based Instruction

Vent	Ventilation
VFR	Visual Flight Rules
Vmc	Minimum Controllable Speed
Vol.	Volume
VOR	VHF Omnidirectional Range

2. PILOT “TYPE RATING” REQUIREMENTS

2.1 Pilot Type Rating:

2.1.1 In accordance with the provisions of the pertinent CFR and AC 120-53, as revised, the same pilot type rating is assigned to the A318, A319, A320, and A321 and is designated “A-320”.

2.1.1.1 Airmen completing necessary checks in the A318-100, A319-100, A320-100/200, or A321-100/200 series aircraft, per 14 CFR Part 61 or in accordance with AC 120-53, as revised, and as prescribed by this report, are assigned the “A-320” pilot type rating.

2.1.2 In accordance with the provisions of the pertinent CFR and AC 120-53, as revised, a specific pilot type rating is assigned to the A330 aircraft and is designated “A-330”.

2.1.2.1 Airmen completing necessary checks in the A330-200/200F/300 series aircraft, per 14 CFR Part 61 or in accordance with AC 120-53, as revised, and as prescribed by this report, are assigned the “A-330” pilot type rating.

2.1.3 In accordance with the provisions of the pertinent CFR and AC 120-53, as revised, a specific pilot type rating is assigned to the A340 aircraft and is designated “A-340”.

2.1.3.1 Airmen completing necessary checks in the A340-200/300/500/600 series aircraft, per 14 CFR Part 61 or in accordance with AC 120-53, as revised, and as prescribed by this report, are assigned the “A-340” pilot type rating.

2.2 Second-in-Command (SIC) Type Rating:

2.2.1 SIC Type Rating: In accordance with the provisions of the pertinent CFR, FAA Order 8900.1, and AC 120-53, as revised, an SIC pilot type rating is assigned to the A318, A319, A320, and A321 and is designated “A-320” with Limitation for “A-320 SIC Privileges Only”.

2.2.2 SIC Type Rating: In accordance with the provisions of the pertinent CFR, FAA Order 8900.1, and AC 120-53, as revised, an SIC pilot type rating is assigned to the A330 and is designated “A-330” with Limitation for “A-330 SIC Privileges Only”.

- 2.2.3 SIC Type Rating: In accordance with the provisions of the pertinent CFR, FAA Order 8900.1, and AC 120-53, as revised, an SIC pilot type rating is assigned to the A340 and is designated “A-340” with Limitation for “A-340 SIC Privileges Only”.

3. “MASTER DIFFERENCE REQUIREMENTS” (MDR)

3.1 Common Requirements:

- 3.1.1 Commonality in Design: The A320 was the first of a series of Airbus airplanes which was designed to incorporate “fly by wire” technology and numerous flight envelope protection features. The A320, A330, A340, and A380 all incorporate advanced features generally not found on other civil transport aircraft, such as a “side stick controller” in lieu of the conventional control column (yoke) and an automatic thrust control system (A/THR), which, when engaged, controls thrust with thrust levers in a fixed position. The incorporation of “fly by wire” and common cockpit design has resulted in a level of commonality in systems, procedures, and handling characteristics among all Airbus “fly by wire” aircraft.

The A320, A330, and A340 have been designed with the following high level of commonality:

- a) The cockpit arrangement has been designed to provide similar dimensions, similar panel arrangement, similar controls (including same slat/flap nomenclature) arrangements, and the same “dark cockpit and push button” concept.
- b) EFIS Primary Flight Displays (PFD) and Navigation Displays (ND) provide similar information, similar symbology, similar color coding, and display principles.
- c) ECAM engine/warning and system displays provide similar information. The “READ and DO” concept diminishes the impact of system dissimilarities when accomplishing normal, abnormal, and emergency procedures.
- d) Auto Pilot/Flight Director/Auto Thrust (FMGC) incorporate similar architecture and generally provide the same functions.
- e) Training and qualification with the Flight Management System (FMS) and its components on one type may be applied to other types, as specified by ODR tables.
- f) Handling qualities, though the size, gross weight, and aerodynamic characteristics of the various aircraft may differ; the Fly By Wire (FBW) system was designed to minimize the differences between each aircraft in terms of handling characteristics. This similarity in the flight control laws permits a significant level of commonality in handling qualities.

- g) Automatic voice callouts for landing may be customized consistent with US policies for low visibility operations (AC 120-28, as revised, Standard Operations Specifications) for the intended operation. Unless otherwise agreed to by the FAA, operators seeking MFF should standardize those callouts within the applicable fleets.
- h) Because of the Automatic Landing System similarities between related aircraft and types, autoland training (including Cat II and Cat III procedures) and qualification may occur, as specified by ODR tables. Autoland authorization must also be approved by the respective POI. For autopilot precision approaches, fail passive and fail operational autopilot minimum use height is as specified by the AFM for the respective mode (i.e., autopilot may remain engaged through completion of the landing rollout for autoland). An operational evaluation of Category III operations with an inoperative engine has been completed for the A320 IAW AC 120-28, as revised.
- i) The use of MDA as entered in the FMS as a Decision Altitude (DA) for non ILS instrument approaches has been specifically evaluated. When an instrument approach is flown using the APP NAV/FINAL modes of the Flight Management System, the MDA altitude may be treated as a DA. This will provide for final descent to the MDA to be followed by either a landing or a missed approach at the MDA. The aircraft may descend up to 50 feet below MDA during the initiation of a go around. Appropriate Operations Specifications must be issued for an operator to utilize this type of approach.

3.1.2 Autopilot Engage Altitudes: As referenced by approved AFMs, the A320, A330, and A340 have specifically been evaluated for autopilot suitability for engagement at or above 100 feet AGL and at least 5 seconds after liftoff during takeoff. For specific operators, authorization for autopilot engagement during takeoff is as designated by individual Operations Specifications.

3.1.3 Aircraft Approach Categories and Circling Minima:

- a) For “straight-in approaches”, the aircraft approach category to be used for the various A320, A330, and A340 related aircraft is as follows:
 - A318, A319, A320 – Category C.
 - A321 – Category C or D, as dependent on the Maximum Certificated Landing Weight (MLW) of the various related A321 aircraft models.
 - A330 – Category C.
 - A340-200/300 – Category C.
 - A340-500/600 – Category D.
- b) For circling, the aircraft approach category to be used for determining the circling minima is as specified in Operations Specifications for each operator.

- 3.1.3 Normal “Final Landing Flap Setting”: The normal “final landing flap setting” is considered to be either “Flaps 3” or “Flaps FULL” for the A320, A330, and A340.
- 3.2 Master Difference Requirements:
 - 3.2.1 Requirements for Particular A320, A330, and A340 Related Aircraft Combinations: For the purposes of applying the provisions of CCQ and MFF, Master Difference Requirements Tables for the A320, A330, and A340 are shown in Appendix 1. These provisions apply to transition between types and mixed fleet flying when differences between related aircraft exists that affect crew knowledge, skills, or abilities relating to flight safety (e.g., Level A or greater differences). Credit for specific maneuvers is permitted between aircraft as specified, even though the aircraft may be assigned Level E for differences and have different pilot type ratings. This is appropriate since common handling qualities and other common characteristics, such as cockpit visibility, may permit certain credit for training, checking, and currency related to takeoff and landing.
 - 3.2.2 MDR Footnotes: Footnotes to MDR requirements define acceptable “required means” or “alternate means” of compliance. A footnote can indicate requirements that are less restrictive than the noted level of difference, or more restrictive than the noted level of difference, depending on the significance of the differences between particular related aircraft.

4. ACCEPTABLE “OPERATOR DIFFERENCE REQUIREMENTS” (ODR) TABLES

- 4.1 ODR Tables: ODR tables are used to show an operator compliance methods. Detailed Airbus generic ODR tables are on file with the Seattle AEG. Copies are available on request. These ODR tables are provided as Airbus generic and, therefore, may not include items that are applicable to particular operators.
- 4.2 Operator Preparation of ODR Tables: Operators flying a “mixed fleet” of A320/A330/A340 and other Airbus related aircraft must have approved ODR tables pertinent to their fleet.
- 4.3 ODR Table Coordination: Unless identical or equivalent ODR tables have been previously approved by the FAA, new ODR tables proposed by operators should be coordinated with the FSB prior to FAA approval and implementation. FSB coordination ensures consistent treatment of related A320/A330/A340 aircraft between various operators and compatibility of each ODR table with MDR provisions.
- 4.4 ODR Table Distribution: 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 should be provided to the applicable A320/A330/A340 FSB Chairmen at the Seattle AEG.

- 4.5 Credit Permitted by ODR Tables:
- 4.5.1 Prerequisite: The ODR tables and associated CCQ credits assume that pilots are qualified, current, and experienced in operating the base aircraft, and meet the specific pre-qualification requirements outlined in paragraph 5.1.1.
- 4.5.2 Training: ODR tables describe differences between one aircraft (base aircraft) and another aircraft (difference aircraft) in summary form and are categorized by differences in design features, systems, and maneuvers. Specific training requirements are listed in Section 5.
- 4.5.3 Operating Experience (OE): Credit for OE in one type of aircraft may be applied to related aircraft, as outlined in Section 5.
- 4.5.4 Checking: ODR tables specify minimum levels of checking that satisfy differences requirements or type rating requirements. Checking provisions are outlined in Section 6.
- 4.5.5 Currency: Currency credit is authorized, as outlined in Section 7, and as specified by ODR tables.
- 4.5.6 A320, A330, and A340 MFF: For mixed fleet flying of A320, A330, and A340 aircraft, operators may apply for approval under the provisions of AC 120-53, as revised. Operators flying a “mixed fleet” of related aircraft types must have approved ODR tables consistent with the provisions of this report. A320, A330, and A340 MFF includes crews alternately flying different types within a bid period or between PC/PT events. Examples:
- a) A320 and A330
 - b) A320 and A340
 - c) A330 and A340
 - d) A320, A330, and A340

5. FSB SPECIFICATIONS FOR TRAINING

5.1 General

- 5.1.1 Assumptions Regarding Airmen’s Previous Experience: The provisions of this Section apply to programs for airmen who have experience in both air carrier operations under the pertinent CFR and multi-engine transport turbojet aircraft. For airmen not having this experience, additional requirements may be appropriate, as determined by the POI, FSB, and/or AFS-200.

In addition, the following pre-qualification requirements must be met by all CCQ program participants:

Case 1: Between single aisle aircraft and long range aircraft:

- A minimum of 100 hours of line experience on the base aircraft within 120 days IAW 14 CFR Part 121;
- A minimum of 300 hours of line experience on the base aircraft; or
- Specific line experience deemed acceptable and approved by the POI, FSB, or AFS 200.

Case 2: Between the long range aircraft:

- Qualified and current on the base aircraft.

Note: Single aisle aircraft include: A318, A319, A320, and A321. Long range aircraft include: A330 and A340.

Case 3: Prerequisite for airmen qualified, but not current, in the base aircraft:

- Airmen must complete an approved recurrent program on the base aircraft before beginning a CCQ course. If the time since an airman's last flight on the base aircraft exceeds 48 months, the candidate should follow a standard training program (full course).

5.1.2. Training Programs New to an Operator: There may be several training programs for a specific Airbus type and model that are currently FAA-approved. If an operator is initially introducing a specific Airbus type and model aircraft into its fleet and there exists other FAA-approved training programs for that same specific type and model and if differences between aircraft are not a factor, then principal inspectors may approve the training program as consistent with the other previously approved programs. Operators should ensure when related aircraft are added or differences are introduced within a fleet that ODR tables are revised and FAA-approved prior to use. In the event of uncertainty regarding evaluation of a proposed program, the FSB should be consulted.

5.1.3 Training Programs with Differences Between Aircraft (more than one related aircraft): For CCQ transition programs between A320, A330, or A340, or when more than one related aircraft of A320, A330, or A340 is flown, differences programs meeting criteria specified by MDR tables must be described in ODR tables and approved by the FAA.

5.1.4 Training for Seat Dependent Tasks: Accomplishment of certain tasks, procedures, or maneuvers require training of a crewmember for a particular crew position (e.g., captain, first officer, check pilot, etc.). Training programs should recognize and address the necessary seat/position related tasks for the applicable crewmember. Accordingly, training programs should address seat dependent tasks or maneuvers to the extent necessary to satisfy crew qualification objectives and in accordance with ODR tables, when applicable.

5.1.5 Second-in-Command Training Tasks: Flight crews qualified to serve as SIC must accomplish certain tasks, procedures, or maneuvers for the SIC crew position. Training programs should address all training elements of the pertinent CFR in accordance with

FAA Order 8900.1. An SIC Pilot Type Rating may be issued in accordance with the pertinent CFR provided training required by the CFR and FAA Order 8900.1, including tasks stipulated by this report, is completed.

5.1.6 Future Air Navigation (FANS)/RNP/CNS/CPDLC/ADS: Flight crews operating aircraft equipped with FANS software should receive appropriate instruction in its general operational functions and appropriate uses for areas of operation, routes, and procedures to be flown. General training should address communications, navigation, and surveillance (CNS) functions covered by FANS, PBN, and RNP. In addition, sufficient training in use of data link communication and Automatic Dependent Surveillance (ADS) to ensure adequate knowledge, skill, and proficiency for flight crews to operate the above system(s) in typical daily operations (requiring their use) should be provided.

5.2 Initial, Upgrade, and Transition Training

5.2.1 Pilot Initial, Upgrade, and Transition Ground Training: Pilot initial, upgrade, and transition ground training for the A320, A330, and A340 is accomplished as specified by the pertinent CFR. When more than one related aircraft are to be flown or when transition from one related aircraft to another is to be accomplished, appropriate ground instruction in differences is required for each related aircraft consistent with MDR/ODR tables. Training program hours may be reduced as specified in the pertinent CFR. Proposed reduction in training program hours should ensure that key elements critical to crew knowledge/proficiency are not compromised.

Ground training must include, but is not limited to, the following subjects:

- a) Aircraft general description (interior/exterior).
- b) Limitations and performance.
- c) Powerplant.
- d) Aircraft systems (e.g., flight controls, electrical, etc.).
- e) Flight management system.
- f) Autoflight system (including A/THR).
- g) Normal, supplementary, abnormal, and emergency systems operations.
- h) Ground training covering the recognition and recovery from PIO.

5.2.2 Pilots Initial, Upgrade, and Transition Flight Training: Pilots initial, upgrade, and transition flight training is accomplished in accordance with the pertinent CFR or under the provisions of a training center approved under CFR Part 142. When flight training is accomplished, and several related aircraft are to be flown, flight training should suitably address each related aircraft consistent with MDR/ODR tables. Training program hours may be reduced as specified in the pertinent CFR, but not in a manner or in areas which invalidate compliance with provisions of the MDR or ODR tables. Proposed reduction in training program hours should ensure that key elements critical to crew knowledge/proficiency are not compromised.

Flight training must include the following events or maneuvers:

- a) Preflight inspection (interior/exterior) (may be provided by approved audio/visual presentation).
- b) Taxi.
- c) Normal takeoff/landing.
- d) Area departure (SID, radar vectors, MCDU, and FMGS use).
- e) Airwork (Stall prevention).
- f) Normal, abnormal, and emergency procedures.
- g) Area arrival/holding (STAR, radar vectors, MCDU and FMGC use, waypoint sequencing).
- h) Instrument approaches.
- i) Missed approaches.
- j) Sidestick utilization/authority.
- k) Autoflight system (including A/THR).
- l) Electronic Flight Control System protections.

5.2.2.1 Pilot Initial, Upgrade, and transition flight Training:

Steep turns can be trained in normal law by intentional exceedance of roll stability thresholds using the side stick to achieve the desired bank angle.

Stall prevention and recovery from impending stall:

Flight envelope protections are designed to prevent an aircraft from stalling in normal law; however, the aircraft may experience buffet indicative of an impending stall.

In alternate and direct law, the aircraft can stall.

Stall prevention and recovery from impending stall in normal, alternate, and direct law should be trained.

5.2.3 Crewmember Emergency Training: Crewmember emergency training should be conducted for the A320, A330, and A340 aircraft in accordance with the pertinent CFR. The objective of emergency training is to provide crewmembers with the necessary knowledge concerning emergency equipment, situations, and procedures to ensure implementation of the correct actions in the event of an emergency.

Emergency training consists of instruction on the location, function, and operation of emergency equipment that is different in each related aircraft of the A320, A330, and A340 and from other aircraft in the operator's fleet. Where emergency equipment is common, instruction may be adjusted for crewmembers qualified and current on this equipment, provided records are available which demonstrate that crewmembers meet the pertinent CFR requirements. For example, if the fire extinguishers are common to fire extinguishers on other aircraft in the operator's fleet, training may be simultaneously credited for both aircraft. Conversely, for equipment that is unique to an A320, A330, or A340, training on the emergency equipment for each related aircraft is required.

Emergency training also consists of instruction in crewmember emergency assignments and procedures, including crew coordination and communication, the handling of emergency or other unusual situations, and emergency performance and observation drills that are specific to each related aircraft of the A320, A330, and A340.

In accordance with the pertinent CFR and FAA Order 8900.1, emergency training requirements refer to two types of training: “general” emergency training and “aircraft-specific” emergency training. General emergency training is instruction on those emergency items that are common to the A320, A330, A340, and all aircraft in the operator’s fleet (e.g., instruction on fire extinguishers and firefighting procedures) if common to all aircraft. Aircraft-specific emergency training is training on those items that are specific to an A320, A330, or A340 aircraft. An example of aircraft-specific emergency training is instruction on the location of emergency equipment for each related aircraft.

As part of an approved training program, an operator may use many methods when conducting aircraft-specific emergency training, including classroom instruction, pictures, video, ground training devices, computer-based instruction, and static aircraft training.

There are no specified training program hours for Crewmember Emergency Training. A chart addressed in 8900.1 provides “National Norms” for the approval of the general emergency training program hours. The complexity of the different related aircraft of the A320, A330, and A340 and the complexity of the type of operation to be conducted should be considered when approving the A320/A330/A340 aircraft-specific emergency training.

Note: Refer to Appendix 3 for a description of Crewmember Emergency Training Credits between A320, A330, and A340 related aircraft.

5.2.4 Training Areas of Special Emphasis: Advanced features within the electronic flight control system and its associated sidestick controller, along with the A/THR system, warrant special emphasis. These features have an impact on current industry pilot qualification practices, as well as policies related to Flight Operations Evaluation Board (FOEB) requirements for developing and using Master Minimum Equipment Lists (MMELs) for these aircraft. For these reasons, training areas of special emphasis are recommended for the A320, A330, and A340. Such training should be conducted to improve basic crewmember understanding and confidence regarding aircraft handling qualities, options, and procedures as these relate to design characteristics and limitations. Examples of this training include the following:

- a) Knowledge and demonstration of the flight characteristics and the degree of flight envelope protection provided by the various flight control laws for both pitch and roll control, and the normal events which result in changes in the various modes within these laws for the various phases of flight.

- b) Knowledge and demonstration of the use of the “side stick controller”, the relationship between the two side stick controllers, and transfer of controls.
- c) Knowledge and demonstration of the automatic thrust control system, including thrust lever position, use of speed trend information, and the FMA/FCU annunciations related to the various modes of normal/abnormal operation.
- d) Knowledge and demonstration of mode awareness and mode transitions (e.g., FMA, FCU, configuration), regardless of whether initiated by the flight crew or by a system response to design logic.
- e) Knowledge of the normal and alternate braking systems and the means to transition from one system to the other.
- f) Knowledge of recovery from unusual attitudes and airplane upsets.
- g) Knowledge and demonstration of recovery from a low energy state.

5.2.5 Training Areas of Special Emphasis Specific to the A330-200F:

- a) Knowledge of appropriate procedures following cabin depressurization regarding the survey of the courier area and the communication with occupants.
- b) Knowledge of appropriate procedures following a main deck cargo compartment smoke alert regarding the fire protection and commanded depressurization.

5.2.6 Controlled Flight Into Terrain (CFIT): Due to continued industry and FAA efforts to reduce exposure to CFIT accidents, special emphasis on this topic is appropriate.

5.2.7 Automatic Landings: If an operator conducts automatic landings in the A320/330/340, then appropriate training must occur. This training must be conducted either in an A320/330/340 FFS approved for autoland training or in the actual airplane.

5.2.8 Acceptable Training Requirements: Airbus training footprints for A320, A330, and A340 are on file with the Seattle AEG. Copies are available on request. These footprints are the ones used by Airbus Training Centers, and therefore may not include items that are applicable to particular operators.

5.3 Differences Training and Cross Crew Qualification (CCQ)

5.3.1 General: Unless an initial or standard transition program is completed for each related aircraft, differences training is necessary for each related aircraft or type, as provided in MDR and ODR tables. Detailed Airbus generic ODR tables may be obtained through the Seattle AEG. Copies are available on request. These ODR tables are provided as Airbus generic, and therefore may not include items that are applicable to particular operators.

- a) A differences training program recognizes that a trainee has completed initial, upgrade, or transition training in one related aircraft and will receive differences training for the other related aircraft.
 - b) When a differences training program involves related aircraft having the same pilot type rating, coverage of differences may be completed either coincident with each phase of an initial, upgrade, or transition training course, or following completion of that training course. The differences training must be consistent with the provisions of the approved applicable MDR/ODR tables.
 - c) When a differences training program involves related aircraft having different Pilot Type Ratings, coverage of a differences course must be completed in accordance with the prerequisites defined in 5.1.1, and applicable MDR/ODR provisions.
- 5.3.2 Differences Ground Training: Differences ground training is required on the topics applicable to the pertinent related aircraft and is shown by applicable ODR tables.
- 5.3.3 Differences Flight Training: Difference flight training is required in the topics and maneuvers applicable to the pertinent related aircraft that is shown by applicable ODR tables. For an Advanced Qualification Program, “flight qualification events” must be consistent with items specified by the applicable ODR tables.
- 5.3.4 Fleets with Different Engine Types: Mixed-flying of A320, A330, and A340 fleets with different engine types (e.g., A-320 fleet with CFM and IAE engines) require additional training, as shown by applicable MDR/ODR tables.
- 5.4 Recurrent Training
- 5.4.1 Recurrent Ground Training: Courses must include appropriate training in accordance with the pertinent CFR for each related A320, A330, and A340 aircraft type, as specified by MDR and ODR tables for differences training.
- 5.4.2 Recurrent Flight Training: Courses require appropriate maneuvers and procedures identified in the pertinent CFR or as otherwise described in this report. Maneuvers and procedures must account for differences between each related A320, A330, or A340 aircraft operated. The ODR table(s) must identify the differences.
- 5.4.3 Recurrent Training Consideration for Mixed Fleet Flying Operations: When different pilot type ratings are assigned, an alternate plan for recurrent training and checking, as outlined in Appendix 4, is acceptable.
- 5.4.4 Recurrent Training Hours Modification: Training program hours for recurrent training may be reduced, as specified in the pertinent CFR.

5.5 Operating Experience

5.5.1 Operating Experience Pertinent to Each Flight Crewmember: Operating experience must be obtained while serving in a primary crew position.

5.5.2 Separate Operating Experience for Single Fleet Operations: Operating experience for the A320 may be accomplished in any related A320 aircraft. Operating experience for the A330 may be accomplished in any related A330 aircraft. Operating experience for the A340 may be accomplished in any related A340 aircraft.

5.5.3 Operating experience for Mixed Fleet Flying Operations: Though separate operating experience applies to A320, A330, and A340 aircraft, credit may be granted in accordance with the provisions of this report and AC 120-53, as revised. Under Mixed Fleet Flying, prerequisite experience and OE may be combined, as outlined in Appendix 5.

Pilots transitioning from the A340-200/300 series aircraft to the A340-500 series must complete one segment of operating experience under the supervision of a qualified check pilot. Pilots transitioning from the A340-500 series aircraft to the A340-600 series must complete one segment of operating experience under the supervision of a qualified check pilot. Pilots transitioning from the A340-200/300 series aircraft to the A340-600 series must complete two segments of operating experience under the supervision of a qualified check pilot.

Note: Provisions of this paragraph do not preclude additional and separate requirements which otherwise may be necessary, such as compliance with the pertinent CFR regarding operations in special areas or into special airports.

5.6 Other Training

5.6.1 LOFT Programs: When operators have LOFT programs and several related A320, A330, and/or A340 aircraft, POIs should review LOFT credits to assure suitability for each related aircraft. If FFS used for LOFT have differences from the related aircraft actually flown, LOFT credits may be reduced or eliminated if such differences are determined to have a significant adverse impact on the effectiveness of LOFT.

5.6.2 Instrument Approaches: When crews simultaneously qualify for use of CAT II or CAT III approaches, credit, as permitted by ODR tables, may apply.

Note: Operators should assure that crews are familiar with appropriate use of the FCU and FMS, including modes to be used, for the types of instrument approaches to be flown. This is particularly important when using RNAV and FLS methods in lieu of or in conjunction with NDB, VOR, localizer, or back course localizer procedures. This emphasis is also appropriate for aircraft that do not have certain navigation system sensors, such as ADF, installed.

- 5.6.3 Aircraft Dispatchers: Initial and transition ground training must be accomplished in compliance with the pertinent CFR for each related aircraft in an operator's fleet. Dispatchers may be simultaneously qualified for all A320, A330, and A340 related aircraft. However, for related aircraft having different performance, procedures, or limitations (i.e., MEL, CAT III, Engine Intermix, ETOPS, or other such differences), dispatchers must be trained to suitably address those differences. Records should indicate each related aircraft for which dispatchers are qualified.
- 5.6.4 Flight Attendants: Initial and transition ground training should be conducted in accordance with the pertinent CFR. The objective of aircraft ground training is to provide flight attendants with an understanding of the A320, A330, and A340 related aircraft, as appropriate. This knowledge is necessary for the flight attendant to perform the duties and procedures required in normal, abnormal, and emergency situations.

Because of similarities in cabin configuration, flight attendants may be concurrently qualified in any combination of A320, A330, and A340 related aircraft. Such qualification, however, must address all differences in doors, slides, communications, and emergency equipment/procedures when common qualification applies. Appendix 3 highlights applicable commonality and differences which may be applied to flight attendant training programs for the A320, A330, and A340 related aircraft.

Aircraft ground training includes instruction in two distinct subject areas: A320, A330, and A340, as appropriate, general operational subjects training, and A320, A330, and A340, as appropriate, aircraft-specific emergency subjects training. The aircraft-specific emergency subjects training is addressed in Appendix 3.

A320, A330, and A340, as appropriate, general operational subjects training consists of instruction in the general description of the aircraft, aircraft equipment, furnishings and systems, routine crewmember communication and coordination procedures, routine crewmember duties and procedures during each phase of flight, and passenger handling responsibilities for A320, A330, and A340 aircraft. As part of an approved training program, an operator may use many methods when conducting aircraft ground training, including classroom instruction, pictures, videotape, ground training devices, computer-based instruction, and static aircraft training.

Initial and Transition Ground Training must include a competence check to determine flight attendant ability to perform assigned duties and procedures on the appropriate A320, A330, and A340 aircraft. The competence check should cover each piece of emergency equipment and each emergency procedure unique to the appropriate aircraft.

Training program hours for initial ground training may be reduced, as specified in the pertinent CFR. There are no specified training program hours for transition ground training. Specific design features of the A320, A330, and A340 aircraft, as appropriate, combined with the various types of operations to be conducted, should be considered when approving transition ground training.

6. FSB SPECIFICATIONS FOR CHECKING

6.1 General

Checks or evaluations are specified by the pertinent CFR, FAA Order 8900.10, FAA Practical Test Standards (PTS), and, in conjunction with procedural proficiency, planning, crew coordination, crew interaction, and aircraft handling skills. Evaluations apply separately to A320, A330, and A340 aircraft unless otherwise permitted by MDRs and ODRs (e.g., from A320 to A340 or from A340 to A320). Checks must be conducted in an approved flight training device, full flight simulator, or in the aircraft, and must include a demonstration of competency covering an oral or written exam and a demonstration of flying and procedural proficiency, as applicable. Certification of knowledge of a crew member must be accomplished following training by completion of an exam using the procedure described in the pertinent CFR. Checking is to be completed following training.

6.1.1 Checking

Steep turns can be checked in normal law by intentional exceedance of roll stability thresholds using the side stick to achieve the desired bank angle.

Stall prevention and recovery from impending stall:

Flight envelope protections are designed to prevent an aircraft from stalling in normal law; however, the aircraft may experience buffet indicative of an impending stall.

In alternate and direct law, the aircraft can stall.

Checking of prevention, recognition, and recovery from impending stall should be tested in alternate and direct law.

6.1.2 No Flap/No Slat or Abnormal Flap or Abnormal Slat Approach: The control laws to be used are the control laws dictated by the particular failure condition simulated. (May be induced by a dual hydraulic failure.) If the maneuver is conducted in an aircraft, due to system logic, a Flaps 1 approach to a missed approach will be used. If in the aircraft, circuit breakers must not be pulled and hydraulic systems must not be depressurized to create the failed condition. If the maneuver is conducted in an FFS, the approach must be continued to a landing.

6.1.3 Manual Pitch Trim: Approaches or approaches and landings must not be conducted using only manual pitch trim and rudder (simulated loss of all flight control computers).

6.2 Type Ratings

6.2.1 Type Rating Following Standard Program:

a) Oral or/and Written tests: Unless otherwise specified by ODR tables, an oral or written portion of a type rating practical test need only address the Airbus aircraft

type to be flown or to be used for the conduct of the flight test. If information applicable to the other related aircraft is a factor in conducting an oral or written test, the applicant should be advised as to which additional/related aircraft the test will include.

b) Practical tests: This is not an all-inclusive list of items which are required to be evaluated. The purpose of this list is to supplement the basic requirements and provide additional guidance where appropriate. This list does not preclude the authority to waive individual items in accordance with the pertinent CFR, FAA Order 8900.1, or FAA Practical Test Standards (PTS), if appropriate conditions are met.

1) Area Departure and Arrival Using the Appropriate Level of Automation for a Given Situation:

- Using normal features of the FMGS.
- Using autothrust.
- Using flight director.
- Using autopilot.

2) Approaches:

- Other than ILS, GLS, or MLS: At the discretion of the inspector/examiner, one approach with either “MANAGED” OR “SELECTED” vertical mode (FPA or V/S with associated lateral modes NAV, TRK, or HDG, AP OFF, ATHR ON) may be requested.
- Normal ILS/MLS/GLS (All Engine Flight Director or Coupled Approach): At the discretion of the inspector/examiner, a demonstration of ILS/MLS/GLS approaches may be requested in any of the following or combinations of the following:
 - In normal law.
 - In abnormal control laws.
 - With use of FPV (if authorized).
- One-Engine Inoperative CAT I ILS/MLS/ GLS Approach to DA(H): Using normal control law.
- Slat/Flap Approach: Demonstration of abnormal slats/flaps approaches, including a no slat/flap approach.

3) Landings:

- Direct Law: At the discretion of the inspector/examiner, one landing in direct law may be required.
- Autoland (if authorized).

6.2.2 Type Rating Checks Following CCQ Programs: Under the CCQ concept and IAW the provisions of AC 120-53, as revised, type rating checks need only test the differences, as identified in the ODR tables, provided the airman is current in the base aircraft. Oral or/and written exams should, at a minimum, ensure comprehensive knowledge of differences described in the ODR tables. Under CCQ, the practical test need only

encompass the applicable difference level, as identified in the ODR tables, and as outlined in Appendix 6.

6.3 Proficiency Checks

6.3.1 General: Proficiency checks are administered as required in the pertinent CFR. These checks must be administered by an authorized check pilot or qualified FAA Aviation Safety Inspector. Checking requirements address each related A320, A330, and A340 aircraft, as appropriate, flown. When a proficiency check/evaluation addresses qualification in more than one related A320, A330, and A340 aircraft, as appropriate, the check may primarily address one related aircraft. However, portions of the check should be accomplished in relevant combinations of training devices, full flight simulators, or aircraft to ensure assessment of competency related to other related aircraft flown. Except as specified in approved ODR tables, proficiency checks/evaluations are administered separately for each type certificated aircraft.

6.3.2 Alternating Proficiency Checks in Mixed Fleet Flying (MFF) Operations: For MFF between A320, A330, and/or A340 aircraft types, proficiency checks should alternate for PICs and other flight crewmembers, as outlined in Appendix 4.

Note: Satisfactory completion of a proficiency check may be substituted for recurrent flight training, as permitted in the pertinent CFR, for either the A320, A330, or A340 aircraft.

6.4 Line Checks

6.4.1 MFF Operations: Line checks completed for either A320, A330, or A340 aircraft may satisfy the requirement for the other aircraft type(s).

7. FSB SPECIFICATIONS FOR CURRENCY AND RECENT EXPERIENCE

7.1 Currency for Mixed Fleet Flying Operations: These are shown in MDR/ODR tables.

7.1.1 Methods for Re-establishing Currency:

- a) Re-establishing mixed fleet flying currency at Level A, B, or C: If necessary, currency is re-established at difference Level A, B or C, as provided in AC 120-53, as revised.
- b) Re-establishing Mixed Fleet Flying Currency at Level D or E: Flight crewmembers re-establishing currency at Level D or E is as specified in the pertinent CFR or as specified by ODR tables and IAW AC 120-53, as revised. During line operations, currency may be re-established under the supervision of an appropriately qualified check pilot serving as PIC. Currency may also be re-established by an FFS proficiency check or by completing an approved recurrent training course.

- c) Re-establishing Single Fleet Currency: Flight crewmembers re-establishing currency is as specified in the pertinent CFR. During line operations, currency may be re-established under the supervision of an appropriately qualified check pilot serving as PIC. Currency may also be re-established by an FFS proficiency check or by completing an approved recurrent training course.

7.2 Recency of Experience Required by the Pertinent CFR: Each aircraft type is addressed separately unless otherwise approved. Recency of experience must include operation/programming of the MCDU, FCU, and ECAM for both arrival and departure.

7.2.1 Takeoff and Landing Credit Permitted: Takeoffs and landings performed in one related A330 aircraft type are equivalent to those performed in the other related A340 aircraft type. This is appropriate because of similar handling characteristics. The following Recency of Experience provisions apply to programs approved through ODR tables:

MIXED FLEET AIRCRAFT TYPES	RECENT EXPERIENCE REQUIREMENTS (90 DAYS)
A330 AND A340	<ul style="list-style-type: none"> - 3 TAKEOFFS AND LANDINGS IN EITHER A330 OR A340 - 1 TAKEOFF AND LANDING IN EACH TYPE
A320 AND (A330 OR A340)	<ul style="list-style-type: none"> - 3 TAKEOFFS AND LANDINGS IN EITHER THE A320 OR (A330 OR A340) - 1 SEGMENT IN THE A320 AND (A330 OR A340) ** - 1 MANUAL LANDING AS PF IN A320 AND (A330 OR A340)
A320 AND A330 AND A340	<ul style="list-style-type: none"> - 3 TAKEOFFS AND LANDINGS IN EITHER THE A320 OR A330 OR A340 - 1 SEGMENT IN THE A320 AND (A330 OR A340) ** - 1 MANUAL LANDING AS PF IN THE A320 AND A330 AND A340

** Number of segments should be increased if mission and operational procedures are assessed to be different (e.g., oceanic, polar, ETOPS, etc. vs. short haul domestic routes/operations).

Note: For the purposes of this report, a “segment” consists of the following flight phases or maneuvers: Preflight, start, takeoff, climb, cruise, descent, approach, landing, and shutdown. Credit for a segment requires that a crewmember serve in an appropriate cockpit crew position (left or right pilot seat) during the necessary flight phases or maneuvers, but does not require the crewmember to physically

control the aircraft or autopilot during those maneuvers. For example, both pilots may take credit for a segment even though only one actually controls the aircraft during the takeoff and landing. Credit for the cruise phase is achieved by serving in a crew position during any part of cruise. It is not necessary to serve in a crew position for the entire cruise time, since long range flights may require crew relief. Pilots may not take credit for a segment by observation from a jumpseat, or by serving in a relief capacity during the cruise phase of flight only, regardless of flight time accrued in cruise. Cumulative completion of a segment is permitted. A segment may be completed in one flight, or by cumulatively completing the necessary phases and maneuvers in more than one flight. For example, a takeoff, departure, and initial cruise may be performed on one long range flight and descent, approach, and landing on the next, allowing credit for a single segment, provided an acceptable means of tracking these events is used. A segment may be completed in an approved FFS under an approved LOFT scenario.

8. AIRCRAFT REGULATORY COMPLIANCE CHECKLIST

8.1 Compliance Checklist (see Appendix 7)

8.1.1 General: Compliance checklists are provided as an aid to FAA Certificate-Holding District Offices (CHDO) in identifying those specific rules or policies for which compliance has already been demonstrated to FAA for a particular type certificated aircraft and its related aircraft. The checklist also notes rules or policies not demonstrated to the FSB, which must be demonstrated to CHDOs by operators.

8.1.2 A320 and A330 Compliance Checklist: An aircraft compliance checklist for the A320 and A330-200/300 is provided in Appendix 7.

8.1.3 A330-200F Compliance Checklist: A preliminary compliance checklist for the A330-200F is included in the A330-200/300 Compliance Checklist in Appendix 7. Full compliance will be determined after an A330-200F of United States registry becomes available.

8.1.4 A340 Compliance Checklist: A preliminary compliance checklist for the A340 is provided in Appendix 7. Full compliance will be determined after an A340 of United States registry becomes available.

8.2 Discussion of Specific Compliance Items

8.2.1 Observer Seat:

- a) A320 Observer Seat: The seat referred to as the “third occupant seat” (right forward seat) is considered to have met pertinent CFR requirements. The seat referred to as

the “fourth occupant seat” (left forward seat) may be used by FAA inspectors at their discretion.

- b) A330 and A340 Observer Seat: The seat referred to as the “third occupant seat” (left forward seat) is considered to have met pertinent CFR requirements. The seat referred to as the “fourth occupant seat” (right forward seat) may be used by FAA inspectors at their discretion. Neither seat is designed nor intended for use as a crew rest station for compliance with the pertinent CFR or AC 121-31, as revised.

8.2.2 Emergency Evacuation:

- a) A320: An actual full scale demonstration of emergency evacuation procedures, in accordance with 14 CFR Part 121, was successfully completed for the A320 up to a maximum passenger capacity of 179. Accordingly, an actual full scale evacuation demonstration, required by 14 CFR Part 121 for individual operators, is not required unless a passenger capacity greater than 179 is requested. However, a partial demonstration evacuation, as required by 14 CFR Part 121, is required for each new A320 operator.
- b) A319: A demonstration of emergency evacuation procedures, in accordance with 14 CFR Part 121, was successfully completed by analysis for the A319 up to a maximum passenger capacity of 145. Accordingly, an actual full scale evacuation demonstration, required by 14 CFR Part 121 for individual operators, is not required unless a passenger capacity greater than 145 is requested. However, a partial demonstration evacuation, as required by 14 CFR Part 121, is required for each new A319 operator.
- c) A321: A demonstration of emergency evacuation procedures, in accordance with 14 CFR Part 121, was successfully completed by analysis for the A321 up to a maximum passenger capacity of 220. Accordingly, an actual full scale evacuation demonstration, required by 14 CFR Part 121 for individual operators, is not required unless a passenger capacity greater than 220 is requested. However, a partial demonstration evacuation, as required by 14 CFR Part 121, is required for each new A321 operator.
- d) A318: A demonstration of emergency evacuation procedures, in accordance with 14 CFR Part 121, was successfully completed by analysis for the A318 up to a maximum passenger capacity of 136. Accordingly, an actual full scale evacuation demonstration, required by 14 CFR Part 121 for individual operators, is not required unless a passenger capacity greater than 136 is requested. However, a partial demonstration evacuation, as required by 14 CFR Part 121, is required for each new A318 operator.
- e) A330: A demonstration of emergency evacuation procedures, in accordance with 14 CFR Part 121, was successfully completed by analysis for the A330, based on a similar configuration and passenger capacity, as is approved for the A300, up to a

maximum passenger capacity of 375 for aircraft with a three pair Type A and one pair Type 1 (AA1A) door configuration and 379 for aircraft with a four pair Type A (AAAA) door configuration. Accordingly, an actual full scale evacuation demonstration, required by 14 CFR Part 121 for individual operators, is not required unless a passenger capacity greater than the certificated capacity is requested. However, a partial demonstration evacuation, as required by 14 CFR Part 121, is required for each new A330 operator.

Note: The A330-200F has a maximum capacity of 12 supernumeraries in the cabin area. An emergency evacuation demonstration is not a requirement under 14 CFR Part 121 for this aircraft configuration.

- f) A340-200/300: A demonstration of emergency evacuation procedures, in accordance with 14 CFR Part 121, was successfully completed by analysis for the A340, based on a similar configuration and passenger capacity, as is approved for the A300, up to a maximum passenger capacity of 375 for aircraft with an AA1A door configuration and 379 for aircraft with an AAAA door configuration. Accordingly, an actual full scale evacuation demonstration, required by 14 CFR Part 121 for individual operators, is not required unless a passenger capacity greater than the certificated capacity is requested. However, a partial demonstration evacuation, as required by 14 CFR Part 121, is required for each new A340 operator.
- g) A340-500/600: A demonstration of emergency evacuation procedures, in accordance with 14 CFR Part 121, was successfully completed by analysis for the A340, based on a similar configuration and passenger capacity, as is approved for the A300, up to a maximum passenger capacity of 375 for A340-500 aircraft and 379 for A340-600 aircraft. Accordingly, an actual full scale evacuation demonstration, required by 14 CFR Part 121 for individual operators, is not required unless a passenger capacity greater than the certificated capacity is requested. However, a partial demonstration evacuation, as required by 14 CFR Part 121, is required for each new A340 operator.

8.2.3 Ditching Demonstration:

- a) A320: Documentation provided to the FSB indicates the A320 received credit for a full scale ditching demonstration, in accordance with 14 CFR Part 121 and FAA Order 8900.1.
- b) A330: A full scale ditching demonstration, in accordance with 14 CFR Part 121 and FAA Order 8900.1, has been completed.
- c) A340: A full scale ditching demonstration, in accordance with 14 CFR Part 121 and FAA Order 8900.1, has been completed.

8.2.4 Proving Runs:

- a) A320: Initial 14 CFR Part 121 proving runs, in accordance with provisions of 14 CFR Part 121, have been completed. Proving runs in accordance with the pertinent CFR are appropriate in accordance with FAA Order 8900.1.
- b) A330: Initial 14 CFR Part 121 proving runs, in accordance with provisions of 14 CFR Part 121, have been completed. Proving runs in accordance with the pertinent CFR are appropriate in accordance with FAA Order 8900.1.
- c) A340: Initial proving runs in accordance with provisions of the pertinent CFR have not been completed.

9. FSB SPECIFICATION FOR DEVICES AND SIMULATORS

9.1 Device and Simulator Characteristics: Flight training device (FTD) and Full flight simulator (FFS) characteristics are specified in 14 CFR Part 60, as revised, except as described below.

9.2 Special Requirements: Special FTD or FFS characteristics are described for training, checking, and re-establishing currency.

9.2.1 When different engine display formats are used due to operation with different engine types and in addition to FFS or FTD training for an appropriate related aircraft, crews should be exposed to the alternate engine instrument presentations by some means (e.g., CBT, FFS, photos, drawings, etc.) adequate to assure proper display interpretation and use.

9.2.2 Use of FTDs for Specific Check/Evaluation Items: Certain ATPC, type rating, or proficiency check/evaluation items may be completed in FAA-qualified FTDs. This is appropriate for items such as FMS initialization or engine start non-normals. Specific checking credit in such instances must be approved by the POI.

9.3 Aircraft Full Flight Simulator and Flight Training Device Compatibility: When a mix of type and related aircraft are operated, the combinations of FSTD should adequately address the training requirements. Differences between training equipment and airplanes should be clearly identified with associated training solutions.

9.4 Device Approval: Requests for FSTD approval should be made to the POI. The POI may approve these FSTDs for that operator if their characteristics clearly meet the established FAA criteria and have been qualified by the National Simulator Program (NSP).

9.5 Doors Trainers: Training in accordance with the pertinent CFR must be conducted on an aircraft or in a training device representative of the operator's fleet configuration.

10. APPLICATION OF FSB REPORT

- 10.1 Operators with only One Related Aircraft (no differences): Apply relevant parts of this report (e.g., type rating designation, checking maneuvers related to pertinent CFR, etc.) following the effective date of this report.
- 10.2 Operators with a Mixed Fleet: In addition to the provisions outlined in paragraphs 11.1 and 4.5.6, compliance with MDRs, ODRs, and other relevant FSB report provisions is necessary. Additional guidance may also be found in AC 120-53, as revised.

11. ALTERNATE MEANS OF COMPLIANCE

- 11.1 Approval Level and Approval Criteria: Alternate means of compliance to differences requirements of the pertinent CFR for mixed fleet operations other than as specified in provisions of this report must be approved by the FAA Air Transportation Division (AFS-200). If alternate means of compliance is sought, operators will be required to establish that the proposed alternate means provides an equivalent level of safety to the provisions of AC 120-53, as revised, and this FSB report. Analysis, demonstrations, proof of concept testing, differences documentation, or other evidence may be required.
- 11.2 Equivalent Safety: In the event alternate compliance is sought, training program hour reductions, FFS approvals, and FTD approvals may be significantly limited and reporting requirements may be increased to assure equivalent safety. AFS-200 will generally not consider relief by alternate means of compliance unless sufficient lead time has been planned by an operator to allow for any necessary testing and evaluations.
- 11.3 Interim Programs: In the event unforeseen circumstances make it impossible for an operator to comply with MDR provisions, the operator may seek interim program approval rather than a permanent alternate compliance method. Financial arrangements, scheduling adjustments, and similar justifications are not considered “unforeseen circumstances” for the purposes of this provision.

12. MISCELLANEOUS - RESERVED

APPENDIX 1

MASTER DIFFERENCE REQUIREMENTS (MDR) TABLE

MASTER DIFFERENCE REQUIREMENTS TABLE

Table 1

		FROM AIRPLANE		
		A320	A330	A340
T O A I R P L A N E	A320	See Table 2	E/E/D	E/E/D
	A330	E/E/D	See Table 3	C(1)/B/C(2)
	A340	E/E/D	E/E/C(2)	See Table 4

- (1) C Level only required for cockpit familiarization during the first flight.
- (2) C Level assigned to reflect 90-day currency requirement for one takeoff and landing in each type.

MASTER DIFFERENCE REQUIREMENTS
Pilot Type Rating A320
Table 2

A320		FROM AIRPLANE										
		A318 -100 CFM	A318 -100 PW	A319 -100 CFM	A319 -100 IAE	A320 -100 CFM	A320 -200 CFM	A320 -200 IAE	A321 -100 CFM	A321 -100 IAE	A321 -200 CFM	A321 -200 IAE
T O A I R P L A N E	A318-100 CFM	/	B/A/A	B/A/A	B/A/A	B/A/A	B/A/A	B/A/A	B/A/A	B/A/A	B/A/A	B/A/A
	A318-100 PW	B/A/A	/	B/A/A								
	A319-100 CFM	B/A/A	B/A/A	/	B/A/A							
	A319-100 IEA	B/A/A	B/A/A	B/A/A	/	B/A/A						
	A320-100 CFM	B/A/A	B/A/A	B/A/A	B/A/A	/	A/A/A	B/A/A	B/A/A	B/A/A	B/A/A	B/A/A
	A320-200 CFM	B/A/A	B/A/A	B/A/A	B/A/A	A/A/A	/	B/A/A	B/A/A	B/A/A	B/A/A	B/A/A
	A320-200 IAE	B/A/A	B/A/A	B/A/A	B/A/A	B/A/A	B/A/A	/	B/A/A	B/A/A	B/A/A	B/A/A
	A321-100 CFM	B/A/A	B/A/A	B/A/A	B/A/A	B/A/A	B/A/A		/	B/A/A	A/A/A	B/A/A
	A321-100 IAE	B/A/A	B/A/A	B/A/A	B/A/A	B/A/A	B/A/A	B/A/A	B/A/A	/	B/A/A	A/A/A
	A321-200 CFM	B/A/A	B/A/A	B/A/A	B/A/A	B/A/A	B/A/A	B/A/A	A/A/A	B/A/A	/	B/A/A
	A321-200 IAE	B/A/A	B/A/A	B/A/A	B/A/A	B/A/A	B/A/A	B/A/A	B/A/A	A/A/A	B/A/A	/

NOTE: A318, A319, and A320 aircraft with Modification 160500 (Sharklets), A321 aircraft with Modification 160023 (Sharklets), A320 aircraft with Modification 161000 (PW-(A320-271n models) and those equipped with Modification 161003 (CFM-(A320-251n models) have Level B/A/A differences among all A320 models and series.

MASTER DIFFERENCE REQUIREMENTS
Pilot Type Rating A330
Table 3

A330		FROM AIRPLANE					
		A330 -200 series GE	A330 -200,-200F Series PW	A330 -200,-200F Series RR	A330 -300 series GE	A330 -300 series PW	A330 -300 series RR
T O A I R P L A N E	A330-200 Series GE	/	B/A/A	B/A/A	B/A/A	B/A/A	B/A/A
	A330 -200,-200F PW	B/A/A	/	B/A/A	B/A/A	B/A/A	B/A/A
	A330 -200,-200F RR	B/A/A	B/A/A	/	B/A/A	B/A/A	B/A/A
	A330-300 GE	B/A/A	B/A/A	B/A/A	/	B/A/A	B/A/A
	A330-300 PW	B/A/A	B/A/A	B/A/A	B/A/A	/	B/A/A
	A330-300 RR	B/A/A	B/A/A	B/A/A	B/A/A	B/A/A	/

MASTER DIFFERENCE REQUIREMENTS
Pilot Type Rating A340
Table 4

A340		FROM AIRPLANE			
		A340-200 CFM	A340-300 CFM	A340-500 RR	A340-600 RR
T O A I R P L A N E	A340-200 CFM	//	A/A/A	B/A/B	B/A/B
	A340-300 CFM	A/A/A	//	B/A/B	B/A/B
	A340-500 RR	B/A/B	B/A/B	//	B/A/B
	A340-600 RR	B/A/B	B/A/B	B/A/B	//

APPENDIX 2

ACCEPTABLE OPERATOR DIFFERENCE REQUIREMENTS (ODR) TABLES

(AVAILABLE ON REQUEST FROM SEATTLE AEG)

APPENDIX 3

CREWMEMBER EMERGENCY TRAINING CREDITS

A320

A330

A340

CREWMEMBER EMERGENCY TRAINING CREDITS

A318

- 4 floor level type I doors (2fwd/2aft)
- 2 overwing type III exits (1 over each wing)

OR

- 4 floor level type I doors (2fwd/2aft)
- 0 overwing type III exits

A319

- 4 floor level type I doors (2fwd/2aft)
- 2 overwing type III exits (1 over each wing)

OR

- 4 floor level type I doors (2fwd/2aft)
- 4 overwing type III exits (2 over each wing)

A320

- 4 floor level type I doors (2fwd/2aft)
- 4 overwing type III exits (2 over each wing)

OR

- 4 floor level type I doors (2fwd/2aft)
- 2 overwing type III exits (1 over each wing)

A321

- 4 floor level type I doors (2fwd/2aft)
- 4 floor level type C doors (2fwd/2aft the wing)

The doors on the A318, A319, A320, and A321 are similar in type and operation. There are slight differences in design. There are no escape slides attached to the type C doors. The escape slides for the type C doors are located in the fuselage underneath the floor.

A briefing and hands-on training should be accomplished to identify the differences in type C door emergency opening and escape slide deployment sequence when transitioning from the A318, A319, or A320 to the A321.

A briefing and hands-on training should be accomplished to identify the differences in type III exits when transitioning from the A321 to the A318, A319, or A320.

A330-200/300 & A340-200/300/500

- 6 type A doors (fwd/mid/aft)
- 2 floor level type I door (aft of the wing)

OR

- 8 type A doors

A330-200F

- 2 type A doors (fwd L/R)
- 1 main deck cargo door

A340-600

- 8 type A doors
- 1 pair of oversize Type III exits

Credit for crewmember emergency training between A330 and A340 is appropriate if configuration is identical. A briefing and hands-on training should be accomplished if different types of doors are installed.

A briefing and hands-on training should be accomplished to identify the differences in type III exits when transitioning from the A330-200/300 and A340-200/300/500 to the A340-600.

APPENDIX 4

**ALTERNATE RECURRENT
AND
PROFICIENCY CHECK
UNDER MIXED FLEET FLYING OPERATIONS**

A320 and A330

A320 and A340

A330 and A340

A320 and A330 and A340

Example of an Acceptable Alternate Recurrent Plan

PT/PC MFF 2 TYPES

A320 and A330

	Year 1		Year 2		Year 3		Year 4	
Period	6 months							
Training	A320	A330	A320	A330	A320	A330	A320	A330
Checking	A320	A330	A320	A330	A320	A330	A320	A330

A320 and A340

	Year 1		Year 2		Year 3		Year 4	
Period	6 months							
Training	A320	A340	A320	A340	A320	A340	A320	A340
Checking	A320	A340	A320	A340	A320	A340	A320	A340

A330 and A340

	Year 1		Year 2		Year 3		Year 4	
Period	6 months							
Training	A330	A340	A330	A340	A330	A340	A330	A340
Checking	A330	A340	A330	A340	A330	A340	A330	A340

Note: Difference training (Level B) for related aircraft within a type are to be addressed during recurrent training.

Example of Acceptable Alternate Recurrent Plans (Training)

PT/PC MFF 3 TYPES (Checking)

A320 and A330 and A340

	Year 1		Year 2		Year 3		Year 4	
Period	6 months	6 months						
Training	A320	A340	A320	A330	A320	A340	A320	A330
Additional Check Item(s) *		A340 (Level E)		A330 (Level B)		A340 (Level E)		A330 (Level B)
Checking	A320	A330	A320	A340	A320	A330	A320	A340

Note: Difference training (Level B) for related aircraft within a series are to be addressed during recurrent training.

* Additional Check Item: As A330 and A340 are different type ratings, an additional check at Level B or Level E, as defined by ODR tables, is required under an alternate recurrent plan for 3 types.

Or

A320 and A330 and A340

	Year 1		Year 2		Year 3		Year 4	
Period	6 months	6 months						
Training	A320	A340	A320	A330	A320	A340	A320	A330
Additional Check Item(s) *		A330 (Level B)						
Checking	A320	A340	A320	A340	A320	A340	A320	A340

Note: Difference training (Level B) for related aircraft within a type are to be addressed during recurrent training.

* Additional Check Item: As A330 and A340 are different type ratings, an additional check at Level B, as defined by ODR tables, is required under an alternate recurrent plan for 3 types.

APPENDIX 5

**OPERATING EXPERIENCE
FOR
MIXED FLEET FLYING OPERATIONS**

Example of Acceptable Operating Experience Plan for Mixed Fleet Flying

Between Single Aisle and Long Range Aircraft

1. Prerequisite, as defined under paragraph 5.1.1, Case 1.
2. CCQ
3. 2 segments of operating experience (OE) are required. Then, 50 hours of consolidation flying within 90 days is required on the difference aircraft.
4. Begin mixed fleet flying.

Between Long Range Aircraft

Because of commonality between the long range aircraft, immediate CCQ onto the second aircraft may be conducted following completion of qualification on the first one, in accordance with approved MDR/ODR tables.

1. Prerequisite, as defined under paragraph 5.1.1, Case 2.
2. CCQ aircraft 2 (difference aircraft)
3. 2 segments of operating experience(OE) and 50 hours of consolidation flying within 90 days is required on one type of aircraft. OE and consolidation flying must be conducted on one type only, but the type may be either the A340 or the A330.
4. Following the consolidation period, 2 additional segments of OE are required on the other type of aircraft before starting mixed fleet flying.

Note 1: - Single aisle aircraft are: A318, A319, A320, and A321.
- Long range aircraft are: A330 and A340.

Note 2: Typically, the last leg of OE is a Line Check.

APPENDIX 6

TYPE RATING CHECKS FOR CCQ

CCQ TYPE RATING TEST

A320 to A330

A320 to A340

A330 to A320

A340 to A320

ORAL and/or WRITTEN TEST

IAW the pertinent CFR and FAA Practical Test Standards (PTS), as appropriate

PRACTICAL TEST (SIMULATOR)

GROUND OPERATIONS

Taxi

TAKEOFFS

Instrument

Rejected Takeoff

Engine Failure after V1

INSTRUMENT PROCEDURES

None Required

INFLIGHT MANEUVERS

None Required

VISUAL APPROACHES

With 2 engines inoperative same side (A340)

LANDINGS

Normal landing

Landing alternate law (A330/A340) – (Optional)

Landing direct law (A320) – (Optional)

Landing with 2 engines inoperative (A340)

NORMAL, ABNORMAL, AND EMERGENCY PROCEDURES

As appropriate

CCQ TYPE RATING TEST

for

A330 to A340

ORAL and/or WRITTEN TEST

IAW the pertinent CFR and FAA Practical Test Standards (PTS), as appropriate

PRACTICAL TEST (SIMULATOR)

GROUND OPERATIONS

None Required

TAKEOFFS

Rejected Takeoff

INSTRUMENT PROCEDURES

None Required

INFLIGHT MANEUVERS

None Required

VISUAL APPROACHES

None Required

LANDINGS

Landing with 2 engines inoperative same side

NORMAL, ABNORMAL, AND EMERGENCY PROCEDURES

As appropriate

CCQ TYPE RATING TEST

for

A340 to A330

ORAL and/or WRITTEN TEST

IAW the pertinent CFR and FAA Practical Test Standards (PTS), as appropriate

PRACTICAL TEST (SIMULATOR)

None Required

APPENDIX 7

AIRCRAFT COMPLIANCE CHECKLIST

This checklist applies to the A320 equipped with either CFM 56 or IAE V2500 engines, the A330 equipped with GE, RR, or PW engines, and the A340 equipped with CFM 56 engines.

Compliance with the following Federal Aviation Regulations and FAA policies has been established for the A320 based upon aircraft MSN 031.

Compliance with the following Federal Aviation Regulations and FAA policies has been established for the A330 based upon aircraft MSN 315.

Compliance with the following Federal Aviation Regulations and FAA policies for the A340 is preliminary. An evaluation and final determination of compliance will be accomplished based on the final configuration of future production aircraft which is destined for air carrier service in the United States.

Items identified as “CHDO” need to be evaluated at the Certificate-Holding District Office prior to aircraft being introduced into revenue service under the pertinent CFR.

AIRBUS A320 - A330 - A340

FSB REPORT - COMPLIANCE CHECK LIST

14 CFR Part 91 REF	SUBJECT	A320 FINDING	A330 FINDING	A340 FINDINGS
91.9	Civil aircraft flight manual, marking, and placard requirements	Type design complies.	Type design complies.	Type design complies.
91.21	Portable electronic devices	CHDO	CHDO	CHDO
91.117	Aircraft speed	Type design complies.	Type design complies.	Type design complies.
91.191	Category II manual	CHDO if operated under 14 CFR Part 91	CHDO if operated under 14 CFR Part 91.	CHDO if operated under 14 CFR Part 91.
91.203	Civil Aircraft: certifications required	CHDO.	CHDO	CHDO
91.205	Powered civil aircraft with standard category US airworthiness certificates; instruments and equipment requirements	Type design complies except (b)(11) CHDO.	Type design complies except (b)(11) CHDO.	Type design complies except (b)(11) CHDO.
91.207	Emergency locator transmitters	NA	NA	NA
91.209	Aircraft lights	Type design complies.	Type design complies.	Type design complies.
91.211	Supplemental oxygen	Type design complies.	Type design complies.	Type design complies.
91.213	Inoperative instruments and equipment	Type design complies. MMEL available.	Type design complies. MMEL available.	Type design complies. MMEL available.
91.215	ATC transponder and altitude reporting equipment use	Type design complies.	Type design complies.	Type design complies.

14 CFR Part 91 REF	SUBJECT	A320 FINDING	A330 FINDING	A340 FINDINGS
91.219	Altitude alerting system or device: turbojet powered civil airplanes	Type design complies except (c) CHDO.	Type design complies except (c) CHDO.	Type design complies except (c) CHDO.
91.221	TCAS	CHDO	CHDO	CHDO
91.317	Provisionally certified civil aircraft: operating limitations	NA	NA	NA
91.409	Inspections	CHDO	CHDO	CHDO
91.413	ATC transponder tests and inspections	CHDO	CHDO	CHDO
91.415	Changes to aircraft inspections programs	CHDO	CHDO	CHDO
91.503	Flying equipment and operating information	Type design check lists and procedures comply. CHDO	Type design check lists and procedures comply. CHDO	Type design check lists and procedures comply. CHDO
91.511	Communication and Navigation equipment for overwater operations	Type design complies. CHDO	Type design complies. CHDO	Type design complies.
91.513	Emergency equipment	CHDO	CHDO	CHDO
91.517	Passenger Information	Type design complies.	Type design complies.	Type design complies.
91.519	Passenger briefing	CHDO	CHDO	CHDO
91.521	Shoulder harness	Type design complies.	Type design complies.	Type design complies.
91.525	Carriage of cargo	Type design complies. CHDO	Type design complies. CHDO	Type design complies. CHDO
91.527	Operating in icing conditions	Type design complies with (b) and (c).	Type design complies with (b) and (c).	Type design complies with (b) and (c).
91.603	Aural speed warning device	Type design complies.	Type design complies.	Type design complies.

14 CFR Part 91 REF	SUBJECT	A320 FINDING	A330 FINDING	A340 FINDINGS
91.605	Transport category civil airplane weight limitations	Weight, balance, and performance information is available for compliance. CHDO	Weight, balance, and performance information is available for compliance. CHDO	Weight, balance, and performance information is available for compliance. CHDO
91.609	Flight data recorders and cockpit voice recorders	Type design complies.	Type design complies.	Type design complies.
91.611	Authorization for ferry flight with one engine inoperative.	Not applicable.	Not applicable.	Type design complies. CHDO
91.805	Final compliance: subsonic airplanes	Type design complies (Stage 3).	Type design complies (Stage 3).	Type design complies (Stage 3).

14 CFR Part 121 REF	SUBJECT	A320 FINDING	A330 FINDING	A340 FINDINGS
121.141	Airplane flight manual	Type design AFM complies. CHDO	Type design AFM complies. CHDO	Type design AFM complies. CHDO
121.157	Aircraft certification and equipment requirements	Type design complies with (b).	Type design complies with (b).	Type design complies with (b).
121.161	Airplane limitations: Type of route.	CHDO	(a)Type design is intended for ETOPS certification (b)Type design is intended for certification under Part 25, including ditching provisions.	Not evaluated
121.173	General	Type design complies with (b) and (d).	Type design complies with (b) and (d).	Type design complies with (b) and (d).
121.189	Airplanes: Turbine engine powered: Take off limitations	Type design complies. CHDO	Type design complies. CHDO	Type design complies. CHDO
121.191	Airplanes: Turbine engine powered: En route limitations: One engine inoperative	Type design complies. CHDO	Type design complies. CHDO	Type design complies. CHDO
121.193	Airplanes: Turbine engine powered: En route limitations: Two engines inoperative e	NA	NA	Type design complies. CHDO
121.195	Airplanes: Turbine engine powered: Landing limitations: Destination airports	Type design complies. CHDO	Type design complies. CHDO	Type design complies. CHDO
121.197	Airplanes: Turbine engine powered: Landing limitations: Alternate airports	Type design complies. CHDO	Type design complies. CHDO	Type design complies. CHDO
121.285	Carriage of cargo in passenger compartments	CHDO	CHDO	CHDO
121.287	Carriage of cargo in cargo compartments	CHDO	CHDO	CHDO

14 CFR Part 121 REF	SUBJECT	A320 FINDING	A330 FINDING	A340 FINDINGS
121.289	Landing gear: aural warning device	Type design complies.	Type design complies.	Type design complies.
121.291	Demonstration of emergency evacuation procedures	Complies except (b) through (e). CHDO	Complies except (b) through (e). CHDO	Complies except (b) through (e). CHDO
121.303	Airplane instruments and equipment	Type design complies.	Type design complies.	Type design complies.
121.305	Flight and navigational equipment	Type design complies.	Type design complies.	Type design complies.
121.307	Engine instruments	Type design complies.	Type design complies.	Type design complies.
121.308	Lavatory fire protection	Type design complies.	Type design complies.	Type design complies.
121.309	Emergency equipment	Type design complies except (b) (1). CHDO	Type design complies except (b) (1). CHDO	Type design complies except (b) (1). CHDO
121.310	Additional emergency equipment	Type design complies. CHDO responsible for (b), (c), (d), (f), (g), (h), and (i).	Type design complies. CHDO responsible for (b), (c), (d), (f), (g), (h), and (i).	Type design complies. CHDO responsible for (b), (c), (d), (f), (g), (h), and (i).
121.311	Seats, safety belts, and shoulder harnesses	Type design complies. CHDO	Type design complies. CHDO	Type design complies. CHDO
121.312	Materials for compartment interiors	CHDO	Type design complies. CHDO	Type design complies. CHDO
121.313	Miscellaneous equipment	Type design complies. CHDO	Type design complies. CHDO	Type design complies. CHDO
121.314	Cargo and baggage compartment	CHDO	Type design complies.	Type design complies.
121.315	Cockpit check procedure	CHDO	Type design complies. CHDO	Type design complies. CHDO
121.316	Fuel tanks	CHDO	Type design complies.	Type design complies.
121.317	Passenger information requirements, smoking prohibitions, and additional seat belt requirements	Type design complies. CHDO	Type design complies. CHDO	Type design complies. CHDO

14 CFR Part 121 REF	SUBJECT	A320 FINDING	A330 FINDING	A340 FINDINGS
121.319	Crew interphone system	Type design complies.	Type design complies.	Type design complies.
121.323	Instruments and equipment for operations at night	Type design complies.	Type design complies.	Type design complies.
121.325	Instruments and equipment for operations under IFR or over the top	Type design complies.	Type design complies.	Type design complies.
121.329	Supplemental oxygen for sustenance: turbine engine powered airplanes	Type design complies. CHDO	Type design complies. CHDO	Type design complies. CHDO
121.333	Supplemental oxygen for emergency descent and for first aid: turbine engine powered airplanes with pressurized cabins	Type design complies, except (c) (2), (3), (4), (d), and (f). CHDO	Type design complies, except (c) (2), (3), (4), (d), and (f). CHDO	Type design complies, except (c) (2), (3), (4), (d), and (f). CHDO
121.335	Equipment standards	Type design complies.	Type design complies.	Type design complies.
121.337	Protective breathing equipment	CHDO	Equipment is in compliance; procedures for use to be reviewed with CHDO.	Equipment is in compliance; procedures for use to be reviewed with CHDO.
121.339	Emergency Equipment for extended over-water operations	Equipment is in compliance; procedures for use to be reviewed with CHDO.	CHDO	CHDO
121.340	Emergency flotation means	CHDO	Type design complies.	Type design complies.
121.342	Pitot heat indication systems	Type design complies.	Type design complies.	Type design complies.
121.343	Flight data recorders	Type design complies.	Type design complies.	Type design complies.
121.345	Radio equipment	Type design complies.	Type design complies.	Type design complies.
121.347	Communication and navigation equipment for operations under VFR over routes navigated by pilotage	Type design complies.	Type design complies.	Type design complies.

14 CFR Part 121 REF	SUBJECT	A320 FINDING	A330 FINDING	A340 FINDINGS
121.349	Communication and navigation equipment for operations under VFR over routes not navigated by pilotage or for operations under IFR or over the top	Type design complies except procedures which are responsibility of CHDO.	Type design complies except procedures which are responsibility of CHDO.	Type design complies except procedures which are responsibility of CHDO.
121.351	Communication and navigation equipment for extended overwater operations and for certain other operations	CHDO	Type design complies except (b). CHDO	Type design complies except (b). CHDO
121.353	Emergency equipment for operations over uninhabited terrain areas: Flag, supplemental, and certain domestic operations	CHDO	CHDO	CHDO
121.355	Equipment for operations on which specialized means of navigation are used	Type design complies.	Type design complies.	Type design complies.
121.357	Airborne weather radar equipment requirements	Type design complies, (c) responsibility of CHDO.	Type design complies, (c) responsibility of CHDO.	Type design complies, (c) responsibility of CHDO.
121.358	Low altitude windshear system equipment requirements	CHDO	CHDO	CHDO
121.359	Cockpit voice recorders	Type design complies.	Type design complies.	Type design complies.
121.360	Ground proximity warning -glide slope deviation alerting system	Type design complies.	Type design complies.	Type design complies.
121.369	Manual requirements	Type design related data and manuals comply, otherwise CHDO.	Type design related data and manuals comply, otherwise CHDO.	Type design related data and manuals comply, otherwise CHDO.
121.397	Emergency and emergency evacuation duties	CHDO	Type design complies, Operator specific functions CHDO.	Type design complies, Operator specific functions CHDO.

14 CFR Part 121 REF	SUBJECT	A320 FINDING	A330 FINDING	A340 FINDINGS
121.485	Flight time limitations: Three or more pilots and an additional flight crewmember	Not applicable.	Not evaluated.	Not evaluated.
121.576	Retention of items of mass in passenger and crew compartments	CHDO	Type design complies	Type design complies
121.578	Cabin ozone concentration	CHDO	CHDO	CHDO
121.579	Minimum altitude for use of autopilot	Compliance based on AFM procedures and limitations. CHDO	Compliance based on AFM procedures and limitations. CHDO	Compliance based on AFM procedures and limitations. CHDO
121.581	Observer's seat: en route inspections	Type design complies.	Type design complies.	Type design complies.
121.587	Closing and locking of flight crew compartment door	Type design complies. Operator procedures CHDO.	Type design complies. Operator procedures CHDO.	Type design complies. Operator procedures CHDO.
121.589	Carry-on baggage	Type design complies. Operator procedures CHDO.	Type design complies. Operator procedures CHDO.	Type design complies. Operator procedures CHDO.

ADVISORY CIRCULARS	SUBJECT	A320 FINDING	A330 FINDING	A340 FINDINGS
AC 90-79	Recommended Practices and Procedures for the Use of Electronic Long-Range Navigation	Aircraft systems and procedures are consistent with this AC.	Aircraft systems and procedures are consistent with this AC.	Aircraft systems and procedures are consistent with this AC.
AC 91-6A	Water, slush, and snow on runway	Aircraft systems and procedures are consistent with this AC.	Aircraft systems and procedures are consistent with this AC.	Aircraft systems and procedures are consistent with this AC.
AC 91-53A	Noise abatement departure profile	Aircraft systems and procedures are consistent with this AC.	Aircraft systems and procedures are consistent with this AC.	Aircraft systems and procedures are consistent with this AC.
AC 120-28D	Criteria for Approval of Category III Weather Minima for Takeoff, Landing, and Rollout	Aircraft systems and procedures are consistent with this AC. AFM provisions address Category III requirements.	Aircraft systems and procedures are consistent with this AC. AFM provisions address Category III requirements.	Aircraft systems and procedures are consistent with this AC. AFM provisions address Category III requirements.
AC 120-29A	Criteria for Approval of Category I and Category II Weather Minima for Approach	Aircraft systems and procedures are consistent with this AC. AFM provisions address Category II requirements.	Aircraft systems and procedures are consistent with this AC. AFM provisions address Category II requirements.	Aircraft systems and procedures are consistent with this AC. AFM provisions address Category II requirements.
AC 120-33	Operational Approval of Airborne Long-Range Navigation Systems for Flight within the North Atlantic Minimum Navigation Performance Specifications Airspace	Aircraft systems and procedures are consistent with this AC.	Aircraft systems and procedures are consistent with this AC.	Aircraft systems and procedures are consistent with this AC.

ADVISORY CIRCULARS	SUBJECT	A320 FINDING	A330 FINDING	A340 FINDINGS
AC 120-35C	Line Operational Simulations: Line Oriented Flight Training, Special Purpose Operational Training, Line Operational Evaluation	Aircraft systems and procedures, and training and checking, and currency identified by the FSB are consistent with this AC. Specific provisions related to LOFT are addressed by paragraph 6.5 of this report.	Aircraft systems and procedures, and training and checking, and currency identified by the FSB are consistent with this AC. Specific provisions related to LOFT are addressed by paragraph 6.5 of this report.	Aircraft systems and procedures, and training and checking, and currency identified by the FSB are consistent with this AC. Specific provisions related to LOFT are addressed by paragraph 6.5 of this report.
AC 120-38	Cabin ozone concentration	Aircraft systems and procedures are consistent with this AC.	Aircraft systems and procedures are consistent with this AC.	Aircraft systems and procedures are consistent with this AC.
AC 120-42B	Extended Operations (ETOPS and Polar Operations)	Not evaluated.	The A330 has been shown to meet type design requirements for extended range operations (ETOPS) as specified by its AFM.	N/A
AC 121-13	Self-contained navigation systems	Aircraft systems and procedures are consistent with this AC.	Aircraft systems and procedures are consistent with this AC.	Aircraft systems and procedures are consistent with this AC.