



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

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## FLIGHT STANDARDIZATION BOARD REPORT

ATR-42 ATR-72

REVISION 4

7/15/2002

ATR-42 -200/300/500  
ATR-72-100/200/210/210A

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PART II- BOARD RECORD

(PERMANENT RECORD OF FSB CONSIDERATIONS INCLUDING PLANS, TESTS, MEETINGS, FINDINGS, AND COMMENTS - AVAILABLE ON REQUEST)

## REVISION RECORD

REVISION NO.	SECTION	PAGE #s	DATE
1	9.2.4	17-27	01/10/94
2	ALL	ALL	02/01/96
3	VARIOUS	VARIOUS	07/01/97
4	VARIOUS	VARIOUS	7/15/2002

This is a major revision of the ATR-42 ATR-72 FSB report, dated 07/01/97. Primarily it addresses changes in Special Training for Winter Operations (Section 6.2.4) associated with Type II and Type IV de-icing fluids for all ATR variants. It provides some editorial corrections and corrects referenced aircraft variants in Appendix 2.

## 1. PURPOSE AND APPLICABILITY

1.1 This Flight Standardization Board (FSB) report specifies FAA master training, checking and currency requirements applicable to crews operating the ATR-42 and ATR-72 aircraft under 14 CFR Parts 121 or Part 125.

Provisions of the report:

- a) Define pilot "type rating(s)" assigned to the ATR-42 and ATR-72,
- b) Describe any unique requirements applicable to initial, transition, upgrade or recurrent training,
- c) Master Difference Requirements (MDR),
- d) Operator Difference Requirements (ODR's),
- e) Describe training device minimum characteristics when necessary to establish compliance with pertinent MDR's,
- f) Set checking standards including specification of those checks that must be administered by FAA or operators and,
- g) List regulatory compliance status (compliance checklist) for the ATR-42 and ATR-72 for Federal Aviation Regulations (FAR's), Advisory Circulars (AC), or other operational criteria for information of FAA Field Offices.

1.2 This report includes:

- a) Minimum requirements which must be applied by FAA field offices, (e.g. MCR's, MDR's, Type Rating designations, etc.),
- b) Information which is advisory in general, but may be mandatory for particular operators if the designated configurations apply, and if approved for that operator (e.g. MDR footnotes, acceptable ODR tables), and
- c) Information used to facilitate FAA review of an aircraft type or variant proposed for use by an operator (e.g. compliance checklist for FAA Field Office use).

Various sections within the report are qualified as to whether compliance is required, recommended, or advisory in nature, considering the provisions of AC120-53.

1.3 Previous ATR-42 ATR-72 FSB reports are superseded. Pertinent requirements applicable to all current variants of the ATR-42 and ATR-72 are included in this report and are to be applied by FAA field offices until amended, superseded or withdrawn by subsequent FSB determinations.

1.4 Relationship Between This Report and an Advanced Qualification Program (AQP). Differences between this 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 incorporated, and where necessary, coordination with the appropriate FSB has been completed.

## 2. PILOT "TYPE RATING" REQUIREMENTS

2.1 Type Rating. IAW the definitions of 14 CFR Part 1 and provisions of 14 CFR Part 61, the type rating assigned to the ATR-42 (200/300/500 series) and ATR-72 (100/200/210/210A series) is ATR-42 ATR-72. All models of the ATR-42 and ATR-72 aircraft are type rated on the same Type Certificate Data Sheet, #A53EU, dated June 19, 1997. Successful completion of the training and certification requirements for any model of one variant (e.g. ATR-72-212) is the same as satisfactorily accomplishing the training and certification requirements on another model (e.g. ATR-42-500) and the ATR-42 ATR-72 pilot type rating may be issued.

## 3. "MASTER COMMON REQUIREMENTS" (MCR's)

3.1 Master common requirements are requirements applicable to crew qualification which pertain to all variants of the same type (e.g. ATR-42-320, ATR-42-200, ATR-72-212A), common type, or related types. Included are requirements for training, checking, and currency for new aircraft and for common application to any variant. MCR's are specified by the FSB when an aircraft is originally type certificated and are revised as necessary when variants are developed. When variants exist, MCR's specify only those items common to all variants.

3.2 No special MCR's are identified beyond those described in 14 CFR Part 61 and Part 121, Appendix F. Most design features remain common to the ATR-42 and ATR-72.

## 4. "MASTER DIFFERENCE REQUIREMENTS" (MDR's)

4.1 Definition. Master difference requirements are those requirements applicable to crew qualification which pertain to differences between variants of the same type, common type, or related types. MDR's are specified by the FSB in terms of difference levels. MDR's apply between particular pairs of variants or variant groups and are shown on an MDR table.

### 4.2 General Provisions.

4.2.1 Master Difference Requirements (MDR's). MDR's for the ATR-42 ATR-72 are shown in Appendix 1. These provisions apply to Mixed Fleet Flying of ATR-42 and ATR-72 aircraft when differences between variants exist which affect crew knowledge, skills or abilities related to flight safety (Level A or greater differences). These requirements also may be applied for transition between variants.

4.2.2 Difference level definitions (A/B/A, etc.). Difference levels are formally designated levels of training methods or devices, checking methods, or currency methods which satisfy differences requirements or type rating requirements pertinent to 14 CFR Part 121. Difference levels specify FAA requirements proportionate to and corresponding with increasing differences between groups of variants. A range of five difference levels in order of increasing requirements, identified as A through E, are each specified for training, checking, and currency. Definition of each level is contained in AC 120-53, Appendix 1, Section 6.

4.2.3 MDR Footnotes. Footnotes to MDR requirements (where they are used) define acceptable "required means" or "alternate means" of compliance. A footnote can indicate requirements that are less or more restrictive than the basic designation depending on the significance of the differences between particular variants

## 5. ACCEPTABLE "OPERATOR DIFFERENCE REQUIREMENTS" TABLES

5.1 ODR Tables. ODR tables are used to show an operator's compliance method. Acceptable Operator Difference Requirements tables for operators conducting mixed fleet operations, using the particular combination of ATR-42 and ATR-72 variants evaluated, are shown in Appendix 2. The ODR tables represent an acceptable means to comply with MDR provisions, for the aircraft evaluated, based on those differences and compliance methods shown. The tables do not necessarily represent the only acceptable means of compliance for operators with aircraft having other differences where compliance methods (e.g. devices, simulators, etc.) are different, or for combinations of aircraft not evaluated. For operators flying variants which are the same as the aircraft used for the ODR table development, and using the same compliance methods, the ODR tables in Appendix 2 have been found acceptable by the FAA. Equivalent tables, therefore, may be approved by a POI for a particular operator.

5.2 Operator Preparation of ODR Tables. Operators flying "mixed fleet" variants with differences not shown in, or addressed by, the acceptable ODR tables attached in Appendix 2, or operators seeking different means of compliance, must prepare and seek FAA approval of specific ODR tables pertinent to their fleet.

5.3 ODR Table Coordination. New ODR tables proposed by operators should be coordinated with the FSB prior to FAA approval and implementation. Through this coordination, the FSB can ensure consistent treatment of variants between various operators' ODR tables and compatibility of the MDR table with MDR provisions.

5.4 ODR Table Distribution. Original approved ODR tables are retained by the operator. Copies of approved ODR tables are retained by the Certificate Holding District Office (CHDO). Copies of all approved ODR tables should be forwarded to the FSB Chairman, Seattle Aircraft Evaluation Group, SEA AEG.

## 6. FSB SPECIFICATIONS FOR TRAINING

### 6.1 General

6.1.1 Minimum Acceptable Training. The underlying objective in both flight and ground training is to

train to proficiency.

6.1.2 Assumptions Regarding the Previous Experience of Airman. The provisions of Section 6 of this report apply to programs for experienced airmen (e.g. airmen who have previous experience in 14 CFR Parts 121 or 125 air carrier operations, former military, commuter, or corporate pilots with turbo-propeller powered aircraft experience, etc.). For airmen not having such experience, additional requirements may be necessary as determined by the POI, FSB, and AFS-200.

6.1.3 Terminology. The terms "must" and "should," as used in this FSB report, are recognized as one acceptable means, but not necessarily the only means, of compliance with Federal Aviation Regulations (FAR's) training requirements. This terminology acknowledges the need for operators to fully comply with FSB report provisions, if this method is to be applied as that operator's means of compliance with 14 CFR Parts 61, 121, 142, and/or 125. Operators who choose this method must comply with each applicable provision. Partial or selective application of the process or its provisions does not constitute an acceptable means of compliance with the FAR's under AC120-53.

6.1.4 Minimum Acceptable Training Requirements For Integrated ATR-42 and ATR-72 Programs. An acceptable ground training curriculum for an ATR-42 ATR-72 program is specified in 6.2.1.1, and includes a thorough discussion of subject areas of special interest and emphasis in 7.1.2.1 and 7.1.2.2. A differences training program assumes a trainee has completed ATR-42 or ATR-72 initial or transition training, and that he or she will receive differences training on the other aircraft. Coverage of differences may be completed coincident with each phase of that training, or following completion of training on the first variant. For ATR-42 ATR-72 programs already approved, reductions through provisions of 121.401(d) or 121.405(d) or programmed hour approvals (e.g. programs under 14 CFR Part 142) less than the national norms (as listed in FAA Order 8400.10), should not be made without coordination with the FSB. Less comprehensive programs will only be approved if equivalence can clearly be established or other special factors apply. Special factors that may be considered by the FSB include allowance of credit for previous applicable experience (e.g. operators implementing combined ATR-42 and ATR-72 fleets who have crews previously qualified on one type) or increases in the quality or effectiveness of the training process (e.g. new types of training devices).

6.1.5 ATR-42 and ATR-72 Individual Programs. Numerous training programs for the ATR-42 and ATR-72 variants are already FAA approved. In addition to meeting the provisions of this report, new training programs for the ATR-42 or ATR-72 should be consistent with previous programs approved for the aircraft. For information regarding previously approved programs, FAA Principal Operations Inspectors or Training Center Program Managers associated with other existing ATR-42 and/or ATR-72 programs may be consulted. In the event of uncertainty regarding evaluation of a proposed program, the FSB should be consulted.

6.1.6 Engine Differences.

6.1.6.1 Operation of the ATR-42 and ATR-72 with the Pratt & Whitney 120, 121, 124 and 127 engines, fitted with the Hamilton Standard 14 SF 5, 247 F, 14 SF 11, or 568 F propellers, has

been evaluated by the FSB. The training, checking, and currency requirements, as outlined by this FSB Report and other sources, will provide sufficient parameters for successful operation of these engine and propeller combinations.

6.2 Initial, Upgrade, or Transition Training. Initial, transition, or upgrade training for the ATR-42 or ATR-72 is accomplished IAW 14 CFR Part 121 Subpart N, SFAR 58 (AQP), or 14 CFR Part 142 Subpart B. When more than one variant is flown, appropriate instruction in systems and/or procedures differences must be required for each variant, consistent with MDR provisions. 14 CFR Part 121 Training program hours may be reduced as specified in §121.405. The reduction must not invalidate compliance with provisions of MDR or ODR Tables, as determined by the FAA.

6.2.1 Pilots: Initial, Transition and Upgrade Ground Training, §§ 61.63, 61.157, 121.419, as applicable. Ground training in the following subjects for the ATR-42 and/or ATR-72 is necessary:

- a. Aircraft General Description (Interior/Exterior)
- b. Powerplant
- c. Aircraft Systems (e.g. Hydraulic, Electrical, etc.)
- d. Limitations
- e. Performance
- f. Warnings and Cautions
- g. Normal/Abnormal Procedures

6.2.2 Pilots: Initial, Transition and Upgrade Flight Training, §§ 61.63, 61.157, 121.424, as applicable. Flight training must provide for the following events or maneuvers:

- a. Exterior Preflight
- b. Cockpit/Cabin Familiarization
- c. Systems Tests and Checks
- d. Automatic Takeoff Power Control System (ATPCS)
- e. Electronic Engine Control System (ECU, EEC, PEC)
- f. Power Management Procedures
- g. No Flap Landing Procedure
- h. Normal/Abnormal Procedures

6.2.2.1 Flight Training Specified By § 121.424. When initial, transition or upgrade flight training and practice specified in § 121.424 is accomplished, and different variants are to be flown, training is considered to suitably address each variant since flight characteristics of all variants is the same or equivalent.

6.2.3 Aircraft Dispatchers: Initial and Transition Ground Training, § 121.422. Dispatchers may be simultaneously qualified for ATR-42 and ATR-72 aircraft. Provisions of 14 CFR Part 121.422(a)(2) are applicable to each variant. If some variants have ER capability and are used in ER operations, dispatchers must be suitably qualified to address ER issues.

6.2.4 Special Training For Winter Operations; § 61.31(h), § 121, Appendix E III(f)(8), and SFAR 58 Qualification, Continuing Qualification and/or Special Purpose Operational Training. Procedures and limitations for operation in moderate or severe icing conditions (specifically freezing rain and freezing drizzle), as contained in the AFM, MEL, FCOM (or equivalent), and ATR Icing Procedures Brochure (as amended), must be trained prior to operation in icing conditions. Due to the specific flow/viscosity properties of Type II and Type IV De-icing Fluids, and their demonstrated effect on the flight characteristics of all ATR variants, special training for winter operations using Type II, and/or Type IV, fluids as described in paragraph 6.2.4.1 is required. Operators whose ground deicing/anti-icing program only allows for use of Type I deicing fluid and prohibits Type II or Type IV fluids need not provide the training for Type II/IV fluids.

6.2.4.1 Flight Training conducted IAW § 121.424, § 121.427, or SFAR 58 requirements must include, as a minimum, two Instrument Takeoffs simulating the use of Type II/IV de-icing fluids, one takeoff must be accomplished with failure of the most critical engine. This training is intended to introduce the high (potentially more than double) force required for rotation at certain gross weight and center of gravity conditions. Effects subsequent to rotation are nominal and the maneuver may be considered complete after "gear up". This training requirement is intended to be a recurring requirement in order for aircrews to operate in known or forecast icing conditions. Training for initial new hires must be accomplished during Initial Training or the initial Qualification cycle. Other flight crewmembers must receive the training during Up-grade, Transition, Recurrent Training, Continuing Qualification, or Special Purpose Operational Training curriculum, as applicable. Completion of this training should become part of the crewmember's permanent training record. A typical de-icing/anti-icing training program is shown in Appendix 3.

6.2.5 Unusual Attitude Training. Initial training should include recognition of, and recovery procedures from, unusual attitudes (Ref. FAA-S-8081-5D, Practical Test Standards; Airbus Industries Aerodynamic Principles of Large-Airplane Upsets, "FAST *Special*" June 1998; FAA-H-8083-15, Instrument Flying Handbook, as amended; FAA-H-8083-3, Airplane Flying Handbook, as amended.)

6.2.6 Crewmember Emergency Training, § 121.417. Crewmember emergency training in all ATR-42 and ATR-72 variants should be conducted IAW § 121.417 and provisions of FAA Order 8400.10 (Air Transportation Operations Inspector's Handbook), Volume 3, chapter 10. Emergency training conducted in either variant applies to all variants except for those differences identified in ODR tables.

### 6.3 Differences Training.

6.3.1 Differences Training, § 121.418. Unless an initial or transition program (including SFAR 58 qualification curriculum) is completed that includes the differences among the ATR-42 and ATR-72 and all their variants, Differences Training is necessary for qualification in the other variants as shown in the MDR. A training program addressing pertinent differences described by individual operator ODR's, including normal and abnormal operations is required for each aircraft flown. A typical differences training program is shown in Appendix 3.

## 6.4 Recurrent Training.

6.4.1 General. The FSB has established requirements for recurrent ground and flight training for each crewmember. Recurrent Training must include appropriate training IAW § 121.427 for each variant group. Recurrent Training and Continuing Qualification curriculums must be IAW the items and levels specified by MDR and ODR tables for initial differences training unless otherwise approved by the FSB.

6.4.2 Recurrent Flight Training, Continuing Qualification Curriculum. Recurrent flight training requires appropriate maneuvers and procedures identified in 14 CFR Part 121, Appendix E for either variant. As permitted by § 121.427(d)(1)(ii), satisfactory completion of a proficiency check, IAW 14 CFR Part 121 Appendix F, may be substituted for training. When ODR table provisions identify differences in maneuvers or procedures between variants, such differences must be addressed in the operator's Recurrent Training program or Continuing Qualification Curriculum, as appropriate.

6.4.3 Recurrent Training Level Adjustments. The FSB will consider proposals to establish recurrent differences training at levels other than those specified in the MDR's on a case by case basis. Any changes to FSB requirements will be identified through footnotes that modify basic MDR provisions. Requests for such changes should be made to the FSB through the Principal Operations Inspector (POI). If the FSB, subject to approval by AFS-200, accepts different levels for recurrent training or checking, provisions will be identified in amended MDR footnotes and revised provisions issued.

6.4.3.1 Recurrent Ground Training Time Reductions. If recurrent ground training for crewmembers is reduced IAW § 121.405 below programmed hours required in § 121.427(c) such reductions must be consistent with MDR provisions.

6.4.3.2 LOFT Programs, § 121.409(b)(3). When operators have LOFT programs, POI's should review those programs to assure their suitability for the variants flown. If simulators used for LOFT have differences from the variants 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.

## 7. FSB SPECIFICATIONS FOR CHECKING

### 7.1 General

7.1.1 Checking Items. Knowledge and skills specified in 14 CFR Section 61.157 and the Airline Transport Pilot and Aircraft Type Rating Practical Test Standards (FAA-S-8051-5, as amended) pertinent to multi-engine turboprop transport aircraft apply to the ATR-42 and ATR-72 variants. Demonstration of checking items may be accomplished in either the ATR-42 or ATR-72 to meet the type rating requirements for the ATR-42 ATR-72. Unless differences training has been given and recorded, all checks must be given in the same variant as used in primary training.

7.1.2 Special Interest and Emphasis. Several design feature differences incorporated into the ATR-42-500 and ATR-72-212A are not available in the other variants. The FSB recommends, for mixed fleet operators, that knowledge of the features identified in Appendix 2, ODR Tables and the items listed in 7.1.2.1 and 7.1.2.2 be evaluated as part of the regular evaluation process.

7.1.2.1 Areas of Special Interest and Emphasis (General) Pertaining to the ATR-42-500 and/or ATR-72-210A.

- a. Increase in SHP with PW 127F (-210A) and PW 127E (-500) engines.
- b. Clever stick pusher logic.
- c. Operation of both air conditioning packs during single engine ground operations.
- d. Inner wing de-icing system.
- e. Additional counter-rotating vortex generators on the wing.
- f. Improved/added Multi-function computer.
- g. Higher single engine service ceiling.
- h. Automatic ignition with power loss.
- i. Transformer Rectifier Unit (ATR-72-210A optional, ATR-42-500 standard).
- j. Anti-icing cycle override.
- k. Six bladed propellers (As installed).
- l. Propeller Electronic Control (PEC).
- m. Automatic CL control (Notch).
- n. Flap settings 0, 15, 25, 35 (-500).
- o. Electric pitch recoupling.

7.1.2.2 Procedures of special interest and emphasis on the ATR-42-500 and/or ATR-72-210A.

- a. Approach and Missed Approach procedures are impacted by automatic operation of CLs, and the additional approach flap setting for the ATR-42-500.
- b. TRU installation has extended range (ER) implications.
- c. Bleeds ON takeoff permitted. ATR-42-500 and 72-210A bleeds are automatically tripped OFF in the event of engine failure during takeoff.

7.2 Type Ratings.

7.2.1 Practical Tests. The FSB has determined that satisfactory completion of a practical type rating evaluation in any ATR-42 or ATR-72 variant will meet the requirement for the ATR-42 ATR-72 type rating. Airmen may complete, as necessary, the type rating practical test required by 14 CFR § 61.63(d) or § 61.157(b) in either the ATR-42 or ATR-72 for the ATR-42 ATR-72 type rating. In order to operate another variant crewmembers operating under 14 CFR Part 121 are required to satisfactorily complete an approved "differences" course in the corresponding model in compliance with the MDR and ODR tables in Appendices 1 through 3. The same requirement should be followed by flight crewmembers operating under 14 CFR Parts 91 or 125.

7.2.2 Oral and Written Tests. Oral, or oral and written tests apply in common to both the ATR-42 and ATR-72 unless otherwise specified by ODR tables. When an airman is qualifying in only the ATR-42 or ATR-72, oral or practical test items need only address the model for which the test is being conducted.

7.2.3 Application For and Issuance of Type Ratings. Airmen completing pertinent Part 61 requirements in either an ATR-42 or ATR-72 may apply to the FAA for the ATR-42 ATR-72 type rating endorsement. Upon completion of required tests, and submission of an application (FAA Form 8410-1), authorized FAA inspectors or authorized designated pilot examiner may issue the necessary pilot certificate with type ratings (i.e. ATR-42 ATR-72).

### 7.3 Proficiency Checks.

7.3.1 General. Proficiency checks are administered as designated in § 121.441 and Part 121 Appendix F for either the ATR-42 or ATR-72, except as may be specified or permitted by MDR and ODR tables. A proficiency check in either the ATR-42 or ATR-72 suffices for the type, if initial and recurrent qualification is conducted IAW MDR and approved ODR tables for that operator. Such checks should assess knowledge and acceptable levels of skill, considering crew position. When checks are conducted for simultaneous ATR-42 and ATR-72 qualification, one aircraft is typically selected as the basic model, and a sufficient number of questions on the other model are covered to ensure effectiveness of differences preparation. The preflight and equipment examination portion of initial and recurrent proficiency checks must address each variant of the ATR being operated by the flightcrew member. These checks must be administered by an authorized check airman or operationally qualified FAA Aviation Safety Inspector. Satisfactory completion of a proficiency check may be substituted for recurrent flight training IAW § 121.433(c).

7.3.2 Alternating ATR-42 and ATR-72 Proficiency Checks (§ 121.441) and Continuing Qualification Evaluations (SFAR 58).

7.3.2.1 For 14 CFR Part 121 mixed fleet flying of ATR-42 and ATR-72 aircraft, proficiency checks may be administered in the following manner:

a) Proficiency Checks may be alternated every six months for PIC's and annually for other flightcrew members.

b) Proficiency Checks and Continuing Qualification Evaluations under SFAR 58 may be given in either variant with differences training on the other variant.

7.3.2.2 Alternating checks may not necessarily eliminate the requirement to address differences between variants as required by the MDR Tables. It is possible that discussion or instruction outlining the unique differences from one variant to another will be necessary in order to ensure a complete understanding of those differences.

7.3.2.3 The FSB recommends that a Differences Training Program be developed and utilized during each checking period. Its believed it is more practical to include differences training and not be bound by the requirement to schedule alternate checking of these variants.

7.4 Qualifications. Only those FAA Aviation Safety Inspectors (ASI's) or check airmen who have completed appropriate qualification in either the ATR-42 or ATR-72 aircraft variants are authorized to administer any check specified in Section 7.

7.4.1 Authorized FAA Aviation Safety Inspectors. For the purposes of airmen certification, authorized FAA ASI's, or Aircrew Program Managers (APM's), are those having completed appropriate qualification in either the ATR-42 or ATR-72 aircraft. Only those FAA ASI's having completed appropriate qualification on either ATR variant may conduct ATP type rating checks in any ATR variant. Completing an approved differences training course for the other model aircraft is highly desirable for those FAA Inspectors who will be expected to perform certification duties in both variants.

7.4.2 Check airmen. Check airmen assigned to the ATR-42 or ATR-72 models for purposes of supervision of Operating Experience (OE) or Supervised Line Flying (SLF) under § 121.434 should have completed an approved differences training course and have completed at least three (3) flight segments and/or three (3) takeoffs and landings in the respective model for which they will serve as check airman.

7.4.3 Recurrent Proficiency Checks. ASI's qualified in either ATR variant must conduct PIC proficiency checks and authorize completion of PIC OE/SLF until such time as properly qualified check airmen have been approved for this purpose.

7.5 Line Checks, § 121.440. After initial qualification in which SLF is required, line checks completed for either the ATR-42 or ATR-72 may satisfy requirements for either aircraft. However, separate line checks may be appropriate for requirements associated with "special routes or airports", as addressed under § 121.445.

7.6 Other Checks. MDR's for the ATR-42 and ATR-72 variants do require the accomplishment of either OE or SLF for differences for mixed fleet flying of variants.

7.7 Operating Experience (AC120-53 or § 121.434). Considering the requirements specified by the ODR Tables, OE required by § 121.434 applies jointly to the ATR-42 and ATR-72 series of aircraft. OE completed in one model does not have to be repeated in the other model. Flight crewmembers completing Initial Training, Transition Training, or SFAR 58 Qualification Curriculum in either the ATR-42 or ATR-72 must also complete a minimum of three SLF flight segments in the other type. These will be under the supervision of a Line Check airman fully qualified and current on the ATR-42 and ATR-72 (see para. 7.7.1 Alternate Operating Experience In Lieu of SLF). Provisions of this paragraph do not preclude additional and separate requirements which otherwise may be necessary, such as compliance with § 121.445 regarding operations in special areas or into special airports. Operating experience and SLF pertinent to each flight crewmember must be obtained while serving in a primary flightcrew position. SLF

must also address pertinent differences among variants of the ATR-42 and ATR-72 aircraft as specified in paragraph 7.1.2.

7.7.1 Alternate Operating Experience In Lieu of SLF. In choosing three (3) SLF segments as a minimum for Operating Experience in the other ATR-42/ATR-72 variant, the FSB did not intend to limit the possibility of credit for other possible methods of gaining suitable experience. To that end a proficiency flight/check profile, with a check airman, in which at least three takeoffs (power manipulations) and landings, at least one of which is made out of either a precision or non-precision approach, may be substituted for the three SLF segments.

## 8. FSB SPECIFICATIONS FOR CURRENCY

### 8.1 Currency (Recent Experience) § 121.439.

8.1.1 Currency Required. Unless approved in ODR tables, currency is addressed separately for the ATR-42 and ATR-72 variants. For programs approved through ODR tables, currency is specified IAW the MDR's.

8.1.2 A variety of means for establishing compliance with Level B currency provisions are acceptable. Examples include the following:

a. Issuance of a bulletin which directs crews to review particular operating manual differences information if a particular model has not been flown within a specified time interval (i.e., review of differences in limitations and procedures, etc.),

b. Crew certification on the dispatch release that they have reviewed pertinent information for the particular model to be flown on that trip, within an operator specified time interval,

c. Explicit tracking of currency requirements based on logbook entries, ACARS data, or other reliable administrative records, or

d. Recurrent training/checking which addresses the features of each pertinent model during each training or checking event.

8.2 Re-Establishing Currency. At level B, currency is re-established by crewmember review of pertinent materials per the operator's guidelines. However, for mixed fleet flying of ATR-42 and ATR-72 variants, if a period of greater than six (6) months has elapsed for PIC's, or SIC's, without flying either variant, then differences re-qualification is necessary. Differences re-qualification may be accomplished for the respective PIC or SIC by:

a. Satisfying the same MDR's and ODR's as for initial differences qualification,

b. Completing an approved recurrent training course or proficiency check which meets the provisions of paragraph 6.4 or 7.3 of this report, or

c. Completing three (3) takeoff and landings with a check airman. This may be in an aircraft or approved simulator.

## 9. AIRCRAFT COMPLIANCE CHECKLIST

9.1 Compliance Checklist. Compliance checklists are provided as an aid to FAA Certificate Holding District Offices (CHDO's) to identify those specific rules or policies for which compliance has already been demonstrated to the FAA for a particular type, variant, or variant group. The checklist also notes rules or policies that remain to be demonstrated to CHDO's by operators. Not all rules or policies or variants are necessarily listed or addressed. When differences exist between the variant(s), which were evaluated with the compliance checklist and the variant(s) used by an operator, the CHDO evaluates those differences and approves use of the variant, if that variant provides equivalent compliance with FAR's or FAA policies. It remains the responsibility of a CHDO to review compliance with pertinent rules or policies not already satisfactorily addressed in the compliance checklist, prior to 14 CFR Part 121 approval of an operator for use of particular ATR-42 or ATR-72 variants.

### 9.2 Discussion of Specific Compliance Checklist Items

9.2.1 ATR Forward Observer Seat. The forward observer seat on all ATR-42 ATR-72 variants meets the requirements of § 121.581.

#### 9.2.2 RESERVED

9.2.3 Emergency Evacuation. The ATR-42 and ATR-72 Emergency Evacuations were successfully demonstrated by simulated Emergency Evacuations credited under § 121.291 for configurations and passenger capacities, which may be specified in FAA Order 8400.10 Vol. 3, Chapter 10, Section 7. The maximum demonstrated seating capacity is 60 for the ATR-42, and 74 for the ATR-72, for use under 14 CFR Part 121. Accordingly, a § 121.291 full scale evacuation is not necessary for future ATR aircraft in configurations consistent with previously approved tests. Passenger capacity less than or equal to the previously demonstrated capacity may be authorized. A mini-evacuation is required unless the particular certificate holder is operating or has previously operated an ATR-42 or ATR-72 variant with the same or similar interior and exit configuration.

#### 9.2.4 Proving Runs, § 121.163.

9.2.4.1 Initial Proving Runs. Initial proving runs IAW provisions of § 121.163 (a) for ATR-42 ATR-72 variants are not required because it has been demonstrated.

9.2.4.2 New Operator. For new operators of ATR-42 and/or ATR-72 variants, proving IAW § 121.163 (b), and FAA Order 8400.10, Vol. 3, Chapter 9 is appropriate.

9.2.4.3 Operators Currently Operating ATR-42 Variants. Credit in the form of proving run time reductions may be given for previous ATR-42 experience for an operator implementing ATR-72 operations, when such previous experience is directly applicable. Proving run requirements and

reductions are as designated by FAA Order 8400.10 and the Certificate Holding District Office, unless otherwise specified by the FSB or AFS-200.

9.2.4.4 Maximum Proving Run Credits. Credit given to operators who have been operating one ATR variant, towards proving runs in another ATR variant, may not exceed an amount of proving time which would leave enough creditable time remaining for completion of the following events, as a minimum:

- a) Completion of 6 separate flight segments (legs),
- b) Operating the airplane into 6 different destinations, if appropriate for that carrier's route structure, and
- c) Operating the airplane a minimum of 6 hours flying time.

## 10. FSB SPECIFICATIONS FOR DEVICES AND SIMULATORS

10.1 Standard Devices and Simulators. Devices and simulators with characteristics pertinent to either the ATR-42 or ATR-72 may be utilized in approved training programs in concert with appropriate differences training, if required for the other variant.

10.2 Unless the actual aircraft is used, training must be conducted in an FAA approved training device. Flight training devices acceptable for ATR-42 or ATR-72 training must include a cockpit-like environment that can provide dynamic flight training in the integrated operation of the ATR-42 and/or ATR-72 components. Such a device must be evaluated by the NSET in consultation with the FSB, prior to receiving credit in an approved training program.

### 10.3 Aircraft/Simulator/Device Compatibility (Ref. § 121.407)

10.3.1 The POI, FSB, NSET, and AFS-200, as appropriate, must address the acceptability of differences between flight training devices, simulators, and aircraft operated. It is the NSET's responsibility to certify acceptable simulators and certain training devices. It is the POI's responsibility to approve a particular simulator or training device for use by the individual operator.

10.3.2 MDR provisions should be used as guidance in device acceptance or approval by POI's.

10.4 Devices Used for Recurrent Proficiency Checks. Recurrent checking may be accomplished in either an ATR-42 or ATR-72 simulator. However, recurrent proficiency checks are to be accomplished in relevant ATR-42 or ATR-72 simulators or combinations of simulators as suited to the particular operator's fleet, fleet mix and approved training program. Checking and simulator use proposals where simulators do not closely match the models to be flown are evaluated on a case by case basis by the POI in consultation with the NSET and the FSB. A POI, FAA Aviation Safety Inspector, designated examiner or check airman may require demonstration of competency in a simulator or the aircraft representing the model to be flown when doubt exists regarding training program adequacy or an airman's preparation or competency.

## 11. APPLICATION OF FSB REPORT

11.1 Operators of ATR-42 and/or ATR-72 Aircraft. Relevant parts of this report (i.e., Type Rating Designation, training and checking, etc.) are effective when the FAA approves the report. Sections or paragraphs of this report related to differences (i.e., MDR's, ODR's, etc.) must be voluntarily applied unless otherwise approved by AFS-200. These provisos may be applied to Transition Programs at the discretion of the operator.

11.2 Mixed Flying of ATR-42 and ATR-72 Aircraft. For operators flying mixed fleets of ATR-42 ATR-72 aircraft, provisions of item 11.1 above apply, and, in addition, compliance with relevant FSB report differences provisions is necessary prior to 14 CFR Part 121 Operations (i.e., have operator specific ODR tables approved by the FAA), or obtain alternate compliance. FAA review and approval of programs, devices, training methods and other items requires a reasonable period of time. Accordingly, operators should plan to submit proposed ODR tables to POI's at least 90 days prior to expected approval date, when possible, in order to assure timely review and approval.

### 11.3 RESERVED

## 12. ALTERNATE MEANS OF COMPLIANCE

12.1 Approval Level and Approval Criteria. Alternate means of compliance to differences requirements of 14 CFR Part 121 Subpart N and O for the ATR-42 and ATR-72, other than as specified in the provisions of this report, must be approved by AFS-200. If alternate compliance is sought, operators will be required to establish that proposed alternate means provide an equivalent level of safety to the provisions of AC120-53 and this FSB report. Analysis, demonstrations, proof of concept testing, differences documentation or other evidence may be required.

12.2 Equivalent Safety Requirements. In the event alternate compliance is sought, training program hour reductions, simulator approvals and device approvals may be significantly limited and reporting requirements may be increased to assure equivalent safety. The FAA will generally not consider relief through alternate compliance means unless sufficient lead time has been planned by an operator to allow for any necessary testing and evaluation.

12.3 Unforeseen Circumstances. In the event of clearly unforeseen circumstances in which it is not possible for an operator to comply with MDR provisions, the operator(s) may seek an interim equivalent 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.

APPENDIX 1 - MASTER DIFFERENCE REQUIREMENTS (MDR's)

ATR-42 ATR-72

Date: 07/01/97

MASTER DIFFERENCES REQUIREMENTS					
TO AIRCRAFT	FROM AIRCRAFT (BASE AIRCRAFT)				
	ATR-42-200/300	ATR-42-500	ATR-72-100/200	ATR-72-210	ATR-72-210A
ATR-42 200/300	-/-	B/A*/B	B/A*/B	B/A*/B	B/A*/B
ATR-42 500	B/A*/B	-/-	A/A*/A	A/A*/A	A/A*/A
ATR-72 100/200	B/A*/B	A/A*/A	-/-	A/A/A	A/A*/A
ATR-72 210	B/A*/B	A/A*/A	A/A/A	-/-	A/A*/A
ATR-72 210A	B/A*/B	A/A/A	A/A*/A	A/A*/A	-/-

NOTE: A\* Specifies a requirement for Supervised Line Flying (SLF) for both crew positions.

APPENDIX 2 - ACCEPTABLE OPERATOR DIFFERENCES  
REQUIREMENTS (ODR's)

ATR 42 ATR 72

DATE: 07/01/97

**DESIGN DIFFERENCES TABLE**

AIRCRAFT: ATR-42 ATR-72

DIFFERENCE AIRCRAFT: ATR-72-100/200 (Excluding -210 and -210A)				COMPLIANCE METHOD					
BASE AIRCRAFT: ATR-42-200/300				TRAINING				CHKG/CURR	
DESIGN	REMARKS	FLT CHAR	PROC CHNG	LVL A	LVL B	LVL C	LVL D	FLT CHK	CURR
AIRPLANE CONFIG	BODY EXTENSION 14'8" WING TIP EXTENSION 4'1" ADDITION OF TAIL BUMPER REPLACEMENT OF CARGO DOOR BY A PASSENGER DOOR & A SERVICE DOOR (101/201 ONLY)	NO	YES	X				A*	
PANEL LAYOUT	ADDITION OF MFC, TLU, DE- ICING OVERRIDE MINOR SWITCH LOCATION CHANGES	NO	YES		X				B
WEIGHT	GROWTH RELATED CHANGES	NO	NO	X					B
POWER PLANT	PW 124 INSTEAD OF PW 120 (OR PW 121 FOR -320)	NO	YES		X			A*	B
REFUELING PANEL	LOCATION, TANK CAPACITY	NO	NO	X					

NOTE: An asterisk (\*) specifies a Supervised Line Flying (SLF) requirement for both crew positions.

**DESIGN DIFFERENCES TABLE**

**AIRCRAFT: ATR-42 ATR-72**

DIFFERENCE AIRCRAFT: ATR-72-210				COMPLIANCE METHOD					
BASE AIRCRAFT: ATR-42-200/300				TRAINING				CHKG/CURR	
DESIGN	REMARKS	FLT CHAR	PROC CHNG	LVL A	LVL B	LVL C	LVL D	FLT CHK	CURR
AIRPLANE CONFIG	BODY EXTENSION 14'8" WING TIP EXTENSION 4'1" ADDITION OF TAIL BUMPER ADDITION OF AN ICE EVIDENCE PROBE ADDITION OF WING VORTEX GENERATORS REPLACEMENT OF CARGO DOOR BY A PASSENGER DOOR & A SERVICE DOOR (-211 ONLY)	NO	YES	X				A*	
PANEL LAYOUT	ADDITION OF: MFC, TLU, DE-ICING OVERRIDE MINOR SWITCH RELOCATION	NO	YES		X				B
WEIGHT	GROWTH RELATED CHANGES	NO	NO	X					B
POWER PLANT	ENGINE: PW 127 INSTEAD OF PW 120 OR 121 PROP: 247F.1 INSTEAD OF 14 SF 5.	NO	YES		X			A*	B
FUEL	TANK CAPACITY REFUELING POINT LOCATION	NO	NO	X					

NOTE: An asterisk (\*) specifies a Supervised Line Flying (SLF) requirement for both crew positions.

**DESIGN DIFFERENCES TABLE**

**AIRCRAFT: ATR-42 ATR-72**

DIFFERENCE AIRCRAFT: ATR-42-500				COMPLIANCE METHOD					
BASE AIRCRAFT: ATR-42-200/300				TRAINING				CHKG/CURR	
DESIGN	REMARKS	FLT CHAR	PROC CHNG	LVL A	LVL B	LVL C	LVL D	FLT CHK	CURR
AIRPLANE CONFIG	ADDITIONAL WING VORTEX GENERATORS PITCH & YAW FLIGHT CONTROLS DERIVED FROM ATR-72	YES	YES	X				A*	B
PANEL LAYOUT	ADDITION OF MFC, TLU, TRU, ANTI-ICING AUTO CYCLE OVERRIDE	NO	YES		X				B
WEIGHT	GROWTH RELATED CHANGES	NO	NO	X					B
POWER PLANT	PW 127 INSTEAD OF PW 120 (OR PW 121 FOR -320) PROPELLER: 568F-1 INSTEAD OF 14 SF 5	YES	YES		X			A*	B

NOTE: An asterisk (\*) specifies a Supervised Line Flying (SLF) requirement for both crew positions.

**DESIGN DIFFERENCES TABLE**

**AIRCRAFT: ATR-42 ATR-72**

DIFFERENCE AIRCRAFT: ATR-72-210A				COMPLIANCE METHOD					
BASE AIRCRAFT: ATR-42-200/300				TRAINING				CHKG/CURR	
DESIGN	REMARKS	FLT CHAR	PROC CHNG	LVL A	LVL B	LVL C	LVL D	FLT CHK	CURR
AIRPLANE CONFIG	BODY EXTENSION 14'8" WING TIP EXTENSION 4'1" ADDITION OF A TAIL BUMPER ADDITION OF AN ICE EVIDENCE PROBE ADDITION OF WING VORTEX GENERATORS	NO	YES	X				A*	B
PANEL LAYOUT	ADDITION OF: MFC, TLU, DE-ICING OVERRIDE MINOR SWITCH RELOCATION	NO	YES	X					B
WEIGHT	GROWTH RELATED CHANGES	NO	NO	X					B
POWER PLANT	ENGINE: PW 127F INSTEAD OF PW 120 (OR PW 121 FOR -320) PROP: 568F-1 INSTEAD OF 14 SF 5	NO	YES		X			A*	B
FUEL	TANK CAPACITY REFUELING POINT LOCATION	NO	NO	X					

NOTE: An asterisk (\*) specifies a Supervised Line Flying (SLF) requirement for both crew positions.

**MANEUVER DIFFERENCES TABLE**

**AIRCRAFT: ATR-42 ATR-72**

DIFFERENCE AIRCRAFT: ATR-72-100/200				COMPLIANCE METHOD					
BASE AIRCRAFT: ATR-42-200/300				TRAINING				CHKG/CURR	
DESIGN	REMARKS	FLT CHAR	PROC CHNG	LVL A	LVL B	LVL C	LVL D	FLT CHK	CURR
PREFLIGHT INSPECTION	EXT INSPECT TO ADD TAIL SKID	NO	YES	X					
TAKE OFF	BLEED VALVES ON (IF RTO = 100%)	NO	YES	X					
BEFORE LANDING	CLs STAY IN THEIR POSITION	NO	YES		X			A*	B
GO AROUND	CLs MOVE AUTOMATICALLY TO MAX RPM	NO	YES		X			A*	B
NO FLAP LANDING	POSSIBILITY OF TAIL STRIKE	NO	YES		X			A*	B

NOTE: An asterisk (\*) specifies a Supervised Line Flying (SLF) requirement for both crew positions.

**MANEUVER DIFFERENCES TABLE**

**AIRCRAFT: ATR-42 ATR-72**

DIFFERENCE AIRCRAFT: ATR-72-210 BASE AIRCRAFT: ATR-42-200/300				COMPLIANCE METHOD					
DESIGN	REMARKS	FLT CHAR	PROC CHNG	TRAINING				CHKG/CURR	
				LVL A	LVL B	LVL C	LVL D	FLT CHK	CURR
PREFLIGHT INSPECTION	EXT INSPECTION CHANGED TO ADD: TAIL SKID ICE EVIDENCE PROBE 2 TAT PROBES 2 ADDITIONAL EXHAUST PORTS ON EACH NACELLE	NO	YES	X					
TAKE OFF	BLEED VALVES ON (IF RTO = 100%)	NO	YES	X					
BEFORE LANDING	CLs REMAIN AT CRUISE POSITION	NO	YES		X			A*	B
GO AROUND	CLs MOVE AUTOMATICALLY TO MAX RPM	NO	YES		X			A*	B
NO FLAP LANDING	TAIL SKID	NO	YES		X			A*	B
SINGLE ENGINE OPERATION	MINIMUM APPROACH SPEED INCREASE (VMCL)	NO	YES		X			A*	B

NOTE: An asterisk (\*) specifies a Supervised Line Flying (SLF) requirement for both crew positions.

**MANEUVER DIFFERENCES TABLE**

**AIRCRAFT: ATR-42 ATR-72**

DIFFERENCE AIRCRAFT: ATR-42-500				COMPLIANCE METHOD					
BASE AIRCRAFT: ATR-42-200/300				TRAINING				CHKG/CURR	
DESIGN	REMARKS	FLT CHAR	PROC CHNG	LVL A	LVL B	LVL C	LVL D	FLT CHK	CURR
PREFLIGHT INSPECTION	ADDITION OF TWO TAT PROBES & TWO EXHAUST PORTS ON EACH NACELLE	NO	YES	X					
TAKE OFF	BLEED VALVES ON (IF RTO = 100%)	NO	YES	X					
BEFORE LANDING	CLs STAY IN AUTO POSITION TWO APPROACH FLAP CONFIGURATIONS	YES	YES		X			A*	B
GO AROUND	CLs STAY IN AUTO POSITION FLAP RETRACTION SEQUENCE CHANGES	NO	YES		X			A*	B

NOTE: An asterisk (\*) specifies a Supervised Line Flying (SLF) requirement for both crew positions.

**MANEUVER DIFFERENCES TABLE**

**AIRCRAFT: ATR-42 ATR-72**

DIFFERENCE AIRCRAFT: ATR-72-210A				COMPLIANCE METHOD					
BASE AIRCRAFT: ATR-42-200/300				TRAINING				CHKG/CURR	
DESIGN	REMARKS	FLT CHAR	PROC CHNG	LVL A	LVL B	LVL C	LVL D	FLT CHK	CURR
PREFLIGHT INSPECTION	EXT INSPECTION CHANGED TO ADD: TAIL SKID ICE EVIDENCE PROBE 2 TAT PROBES 2 ADDITIONAL EXHAUST PORTS ON EACH NACELLE	NO	YES	X					
TAKE OFF	BLEED VALVES ON (IF RTO = 100%) BLEED VALVES AUTO OFF	NO	YES	X					
BEFORE LANDING	CLs REMAIN AT AUTO POSITION	NO	YES		X			A*	B
NO FLAP LANDING	TAIL SKID	NO	YES		X			A*	B
SINGLE ENGINE OPERATION	MINIMUM APPROACH SPEED INCREASE (VMCL)	NO	YES		X			A*	B

NOTE: An asterisk (\*) specifies a Supervised Line Flying (SLF) requirement for both crew positions.

**SYSTEMS DIFFERENCES TABLE**

**AIRCRAFT: ATR-42 ATR-72**

DIFFERENCE AIRCRAFT: ATR-72-100/200				COMPLIANCE METHOD					
BASE AIRCRAFT: ATR-42-200/300				TRAINING				CHKG/CURR	
SYSTEM	REMARKS	FLT CHAR	PROC CHNG	LVL A	LVL B	LVL C	LVL D	FLT CHK	CURR
21 - AIR COND & PRESS	TURBO FANS REPLACE GND COOLING FANS DISTRIBUTION: MINOR CHANGES EXCESS CAB ΔP ALERT ADDED FWD CARGO ISOLATED- (101/201 ONLY)	NO	YES		X				
25 - EMER EQUIP	2 <sup>ND</sup> CABIN ATTENDANT	NO	NO	X					
26 - FIRE PROTECTION	FWD CARGO EXTINGUISHING SYSTEM ADDED (101/201 ONLY)	NO	YES	X					
27 - FLIGHT CONTROLS	STICK PUSHER THRESHOLD LOWERED WITH HORNS ANTI-ICING ON EMER FLAPS 45 DEGREE ABSENT FLAP ASYM ALERT ADDED TLU ADDED ON RUDDER CHANNEL	YES	YES		X			A*	B
31 – INDICATING/RECORDING	MFC ADDED	NO	YES		X			A*	B
73 - 77	PW 124 ENGINES EECs REPLACE ECUs NOTCH & RAMP ON PLs DOUBLE PWR MGT SELECTOR ADCs SWITCHING	NO	YES		X			A*	B

NOTE: An asterisk (\*) specifies a Supervised Line Flying (SLF) requirement for both crew positions.

**SYSTEMS DIFFERENCES TABLE**

**AIRCRAFT: ATR-42 ATR-72**

DIFFERENCE AIRCRAFT: ATR-72-210				COMPLIANCE METHOD					
BASE AIRCRAFT: ATR-42-200/300				TRAINING				CHKG/CURR	
SYSTEM	REMARKS	FLT CHAR	PROC CHNG	LVL A	LVL B	LVL C	LVL D	FLT CHK	CURR
21 - AIR COND & PRESS	TURBO FANS REPLACE COOLING FANS DISTRIBUTION: MINOR CHANGES EXCESS CAB ΔP ALERT ADDED FWD CARGO ISOLATED (-211 ONLY)	NO	YES		X				
25 - EMER EQUIP	2 <sup>ND</sup> CABIN ATTENDANT	NO	NO	X					
26 - FIRE PROTECTION	FWD CARGO EXTINGUISHING SYSTEM ADDED (-211 ONLY)	NO	YES	X					
27 – FLIGHT CONTROLS	STICK PUSHER THRESHOLD LOWERED WITH “ICING AOA” LT ON STICK SHAKER/PUSHER THRESHOLDS CHANGE AS A FUNCTION ON ENGINE TORQUE INHIBITION OF STICK PUSHER WHEN DESCENDING BELOW 500 FT RA EMER FLAPS 45 ABSENT FLAPS 30 SETTING (33 DEGREES INSTEAD OF 28 DEGREES) FLAPS ASYM ALERT ADDED TRAVEL LIMITATION UNIT ADDED ON RUDDER CHANNEL	YES	YES		X			A*	B

(Continued)

**SYSTEMS DIFFERENCES TABLE**

**AIRCRAFT: ATR-42 ATR-72**

DIFFERENCE AIRCRAFT: ATR-72-210 (Cont'd)				COMPLIANCE METHOD					
BASE AIRCRAFT: ATR-42-200/300				TRAINING				CHKG/CURR	
SYSTEM	REMARKS	FLT CHAR	PROC CHNG	LVL A	LVL B	LVL C	LVL D	FLT CHK	CURR
31 – INDICATING/RECORDING	MFC ADDED	NO	YES		X			A*	B
34 – NAVIGATION	ADDITION OF ADC SWITCH	NO	YES		X			A*	B
73 – 77 POWER PLANT	PW 124 ENGINES EEC's REPLACE ECU's NOTCH & RAMP ON PL's DOUBLE PWR MGT SELECTOR								

NOTE: An asterisk (\*) specifies a Supervised Line Flying (SLF) requirement for both crew positions.

**SYSTEMS DIFFERENCES TABLE**

**AIRCRAFT: ATR-42 ATR-72**

DIFFERENCE AIRCRAFT: ATR-42-500				COMPLIANCE METHOD					
BASE AIRCRAFT: ATR-42-200/300				TRAINING				CHKG/CURR	
SYSTEM	REMARKS	FLT CHAR	PROC CHNG	LVL A	LVL B	LVL C	LVL D	FLT CHK	CURR
21 - AIR COND & PRESS	TURBO FAN REPLACES GND COOLING FANS DISTRIBUTION: MINOR CHANGES EXCESS CAB – ALERT ADDED	NO	YES		X				
24 - ELEC POWER	ADDITION OF TRU	NO	YES		X				B
27 - FLIGHT CONTROLS	STICK SHAKER/PUSHER THRESHOLD CHANGES AS A FUNCTION OF TORQUE STICK PUSHER THRESHOLD LOWERED WITH "ICING AOA" LT ON STICK PUSHER INHIBITED DESCENDING BELOW 500 FT RA 4 FLAP SETTINGS (0, 15, 25, 35) FLAPS ASYM ALERT ADDED TRAVEL LIMITATION UNIT (TLU) ADDED TO RUDDER PITCH RECOUPLING ELEC SYSTEM ADDED	YES	YES		X			A*	B
28 – FUEL	RELOCATION OF FUEL TANK TEMP INDICATOR ON OVERHEAD PANEL	NO	NO	X					
30 - ICE & RAIN	ADDITION OF INNER WING DE-ICING BOOTS ADDITION OF AUTO & OVERRIDE PB TO CONTROL ANTI-ICING CYCLE	NO	YES		X				B

Continued

**SYSTEMS DIFFERENCES TABLE**

**AIRCRAFT: ATR-42 ATR-72**

DIFFERENCE AIRCRAFT: ATR-42-500 (Cont'd)				COMPLIANCE METHOD					
BASE AIRCRAFT: ATR-42-200/300				TRAINING				CHKG/CURR	
SYSTEM	REMARKS	FLT CHAR	PROC CHNG	LVL A	LVL B	LVL C	LVL D	FLT CHK	CURR
31 – INDICATING/RECORDING	MCF ADDED	NO	YES		X			A*	B
34 – NAVIGATION	RELOCATION OF TAT/SAS/SAT INDICATOR TWO TAT PROBES ADDITION OF ADC SWITCH	NO	YES		X			A*	B
36 – PNEUMATIC	X-FEED BLEED VALVE IS OPEN DURING SINGLE ENGINE GROUND OPS	NO	NO	X					
61 – PROPS	PROP ELEC CONTROL (PEC) REPLACES HMU NOTCH POSITION ON CLs REMOVED SYNC PB NP = 82% vs. 86%	NO	YES		X			A*	B
73 – 77	PW 127 ENGINES EECs REPLACE ECUs NOTCH & RAMP ON PLs DOUBLE PWR MGT SELECTOR ADCs SWITCHING AUTO IGNITION WHEN NH DROPS BELOW 60% AUTO DUEL IGNITION (IN FLT) REGARDLESS OF SW SELECTION (A, B, OR A+B)								

NOTE: An asterisk (\*) specifies a Supervised Line Flying (SLF) requirement for both crew positions.

**SYSTEMS DIFFERENCES TABLE**

AIRCRAFT: ATR-42 ATR-72

DIFFERENCE AIRCRAFT: ATR-72-210A				COMPLIANCE METHOD					
BASE AIRCRAFT: ATR-42-200/300				TRAINING				CHKG/CURR	
SYSTEM	REMARKS	FLT CHAR	PROC CHNG	LVL A	LVL B	LVL C	LVL D	FLT CHK	CURR
21 - AIR COND & PRESS	TURBO FANS REPLACE COOLING FANS DISTRIBUTION: MINOR CHANGES EXCESS CAB ΔP ALERT ADDED FWD CARGO ISOLATED AUTO BLEED OFF	NO	YES		X				
25 - EMER EQUIP	2 <sup>ND</sup> CABIN ATTENDANT	NO	NO	X					
27 – FLIGHT CONTROLS	STICK PUSHER THRESHOLD LOWERED WITH "ICING AOA" LT ON STICK SHAKER/PUSHER THRESHOLDS CHANGE AS A FUNCTION ON ENGINE TORQUE INHIBITION OF STICK PUSHER WHEN DESCENDING BELOW 500 FT RA EMER FLAPS 45 ABSENT FLAPS 30 SETTING (33 DEGREES INSTEAD OF 28 DEGREES) FLAPS ASYM ALERT ADDED TRAVEL LIMITATION UNIT ADDED ON RUDDER CHANNEL PITCH RECOUPLING ELEC SYSTEM AND AILERON SPRING TABS	YES	YES		X			A*	B

Continued

**SYSTEMS DIFFERENCES TABLE**

**AIRCRAFT: ATR-42 ATR-72**

DIFFERENCE AIRCRAFT: ATR-72-210A (Cont'd)				COMPLIANCE METHOD					
BASE AIRCRAFT: ATR-42-200/300				TRAINING				CHKG/CURR	
SYSTEM	REMARKS	FLT CHAR	PROC CHNG	LVL A	LVL B	LVL C	LVL D	FLT CHK	CURR
30 – ICE PROTECTION	ADDITION OF: INNER WING DE-ICING A LIGHTED ICE EVIDENCE PROBE NEW CYCLES FOR PROPELLER ANTI- ICING AUTO MODE SEL	NO	YES		X				
31 – INDICATING/RECORDING	MFC ADDED	NO	YES		X			A*	B
36 – PNEUMATIC	X FEED BLEED VALVE IS OPEN DURING SINGLE ENGINE OPERATION ON THE GROUND	NO	NO	X					
61 – PROPS	568 F INSTEAD OF 14 SF 5 PROP ELEC CONTROL (PEC) REPLACES HMU NOTCH POSITION ON CLs REMOVED SYNC PB NP = 82% vs. 86%	NO	YES		X			A*	B
73 – 77 POWER PLANT	PW 127 ENGINES EECs REPLACE ECUs NOTCH AND RAMP ON PLs DOUBLE POWER MGT SELECTOR ADCs SWITCHING AUTOMATIC IGNITION IN FLIGHT WHEN NH BELOW 60% AUTOMATIC A+B IGNITION IN FLIGHT REGARDLESS OF CREW SELECTION (A, B, OR A+B) MAN IGNITION vs. CONT IGNITION								

NOTE: An asterisk (\*) specifies a Supervised Line Flying (SLF) requirement for both crew positions.

APPENDIX 3 - ACCEPTABLE TRAINING PROGRAM EXAMPLES

- I. TYPICAL DIFFERENCES TRAINING FOR A MIXED ATR-42 ATR-72 FLEET  
(7/01/1997)
- II. SPECIAL TRAINING FOR WINTER OPERATIONS (5/20/2002)

I. TYPICAL DIFFERENCES TRAINING FOR A MIXED ATR-42 ATR-72 FLEET  
(7/01/1997)

SUBJECT OUTLINE	PROGRAMMED HOURS
A. INTRODUCTION	0.5
B. SYSTEM TRAINING:	
1. EMERGENCY EQUIPMENT (LOCATION AND OPERATION)	0.5-1.0
2. ENVIRONMENTAL SYSTEMS	0.5-1.5
3. FUEL AND POWERPLANT SYSTEMS	1.0-1.5
4. HYDRAULIC POWERED SYSTEMS	1.5-2.0
5. ELECTRICAL SYSTEMS	1.5-2.0
6. PERFORMANCE	0.5-1.0
TOTAL	6.0-9.5 hrs

In addition to the above subjects, training should be given on preflight differences, including interior and exterior inspections. The required number of hours in a differences program will be dependent upon the number of variants flown by each operator.

II. SPECIAL TRAINING FOR WINTER OPERATIONS (5/20/2002)

USE OF TYPE II/IV DE-ICING/ANTI-ICING FLUIDS TRAINING

**Ground Training (CBT or Classroom)**

<b>Subject Outline</b>	<b>Hours</b>
Ground De-Icing Procedure Use of Type II/IV fluids Position of Control Surfaces Effects of Type II/IV Fluids on ATR Description of the Aerodynamic Phenomena Effects On the TO Phase Take Off Procedures AFM Procedures Method No. 1 Method No. 2 * Impact On Performance Assisted TO procedure with Type II/IV * Take Off Briefing Take Off Sequence	<b>Total of all subjects; 0.6 – 1.0 Hrs</b>

\* If the operator chooses to NOT use AFM Method No.2 for Takeoff then this training is not required.

**Flight Training**

**1 Hour**

*Must be accomplished in an FTD or Simulator capable of emulating applicable forces. After take off, the FTD/simulator may be reset to the take off position upon PF's "Gear Up" call.*

Note 1: PF is CM1 (i.e. Captain or Left Seat).

Note 2: Assisted Takeoff is task oriented (not seat dependant). Flight crewmembers capable of occupying either seat must receive training for both conditions (performing the takeoff and assisting the takeoff).

<b>Item Time</b>	<b>Use of Procedures Description</b>	<b>Check List Anti/De Ice</b>	<b>Conditions</b>
<b>1.</b>	Normal Take off  Experience normal forces on elevator.	Normal  Level 1	Normal; Vis. > 10 km OAT. 1°C Ceiling. 1000ft
<b>2.</b>	Take Off with Type II / IV Fluid.  Experience the force required to overcome adverse affect of fluids on elevator.	Level 1 + 2	Icing; Vis. < 1 nm In Moisture TAT.< 7°C Type II / IV applied

<b>3. *</b>	Take Off with Type II / IV Fluid with Assistance. Practice to proficiency.	Level 1 + 2	Icing; Vis. < 1 nm In Moisture TAT.< 7°C Type II / IV applied
<b>4 a.</b>	Take Off with Type II / IV Fluid. Engine Failure at V1. Practice to proficiency.	Level 1 + 2	Icing; Vis. < 1 nm In Moisture TAT.< 7°C Type II / IV applied
<b>OR</b>			
<b>4 b. *</b>	Take Off with Type II / IV Fluid with Assistance. Engine Failure at V1 Practice to proficiency.  Demonstrates that after assistance procedures remain unchanged.	Level 1 + 2	Icing; Vis. < 1 nm In Moisture TAT.< 7°C Type II / IV applied

\* If the operator chooses to NOT use AFM Method No.2 for Takeoff then this training is not required.

APPENDIX 4 - AIRCRAFT COMPLIANCE CHECKLIST

Date: 07/01/97

## **ATR-42 ATR-72 COMPLIANCE CHECKLIST**

This checklist applies to the ATR-42 and ATR-72 Aircraft. Compliance with the following Federal Aviation Regulations and FAA Policies have been established where possible as indicated, based on a field examination of an ATR-42 and ATR-72 aircraft. Items that are identified as "CHDO", need to be evaluated by Principal Inspectors at the Certificate Holding District Office prior to the ATR-42 ATR-72 being used in 14 CFR PART 121 revenue service. Items marked "complies" have either been found to directly comply with the applicable rule, or the necessary data or procedures are available to permit assessment of compliance of an ATR-42 ATR-72 for a particular operation (e.g. as for takeoff obstacle clearance assessment pertinent to § 121.189). Items marked NA are not applicable to the ATR aircraft.

### **14 CFR Part 91**

- 91.24 complies
- 91.27 complies, except (a)(2) and (b) CHDO
- 91.30 complies
- 91.31 compliant upon issuance of Type Certificate (TC)
- 91.32 complies
- 91.33 complies, except (b) (11) CHDO
- 91.34 if applicable to operations other than Part 121 complies, otherwise CHDO
- 91.35 complies
- 91.36 complies
- 91.37 complies
- 91.47 complies
- 91.49 complies
- 91.51 complies, except (c) CHDO
- 91.52 complies; for other than Part 121 Operations, CHDO
- 91.70 complies
- 91.73 complies
- 91.169 CHDO
- 91.171 CHDO
- 91.172 CHDO
- 91.183 complies (should be checked on delivery by CHDO)
- 91.191 complies
- 92.193 complies, except (b) (1) CHDO
- 91.197 complies
- 91.200 complies
- 91.203 complies
- 91.209 (b) and (c) comply
- 91.303 complies; (Stage 3)

### **14 CFR Part 121**

- 121.141 (a) compliant upon issuance of Type Certificate (TC)
- 121.153 (c)(2) pending approval by SEA ACO, CHDO

## 14 CFR Part 121 (Cont'd)

- 121.157 (b) complies
- 121.173 (b) and (d) comply
- 121.189 complies
- 121.191 complies
- 121.195 complies, data provided in AFM
- 121.197 complies, data provided in AFM
- 121.215 complies
- 121.217 complies
- 121.219 complies
- 121.221 complies, forward compartment is Class C, aft compartment is Class D, and the cargo compartment forward of the right rear service door is Class C in the 101 and 201 Models. In the 102 and 202 Models the forward and aft compartments are Class B, and if the cargo compartment forward of the right service door is installed, it is a Class C compartment.
- 121.223 complies
- 121.231 complies
- 121.233 complies
- 121.235 complies
- 121.237 complies
- 121.241 complies
- 121.243 complies
- 121.245 complies
- 121.247 complies
- 121.249 complies
- 121.251 complies
- 121.253 complies
- 121.255 complies
- 121.257 complies
- 121.259 complies
- 121.261 complies
- 121.263 complies
- 121.265 complies
- 121.267 complies
- 121.269 complies
- 121.273 complies
- 121.275 complies
- 121.277 complies
- 121.279 complies
- 121.281 complies
- 121.289 complies
- 121.291 complies, except (b) through (e) CHDO
- 121.303 complies
- 121.305 complies
- 121.307 complies

## 14 CFR Part 121 (Cont'd)

- 121.308 complies
- 121.309 complies, except (b)(1) CHDO
- 121.311 equipment is in compliance; use and procedures per (a), (b), and (d) to be reviewed by CHDO
- 121.312 complies
- 121.313 complies, except (g) CHDO
- 121.315 complies, checklist provided; amended procedures, if any, to be reviewed by CHDO
- 121.317 complies
- 121.318 complies
- 121.319 complies
- 121.323 complies
- 121.325 complies
- 121.329 complies, except (c) (2) & (3) and (b)(3) CHDO
- 121.333 equipment and AFM procedures are in compliance; (c)(2), (3), (4), (d), and (f) operator specific procedures, if any, to be reviewed by CHDO
- 121.335 (b) complies
- 121.337 equipment is in compliance, procedures for use in (b) and (c) to be reviewed by CHDO
- 121.339 (a) (1) equipment complies, procedures to be reviewed by CHDO
- 121.340 (a) complies, (b) CHDO
- 121.341 complies
- 121.342 complies
- 121.343 (a) and (b) comply, (c) and (d) CHDO
- 121.345 complies
- 121.347 complies
- 121.349 complies, except (d) CHDO
- 121.351 (a) complies, (b) CHDO
- 121.353 CHDO
- 121.355 CHDO
- 121.357 complies, except (c) CHDO
- 121.359 complies, except (b) NA
- 121.360 complies, except (d) and (e) CHDO
- 121.369 CHDO
- 121.387 N/A
- 121.576 complies as follows: The ATR-72 meets this requirement with evaluated configuration, other configurations CHDO
- 121.578 complies
- 121.579 compliance to be consistent with AFM provisions, CHDO
- 121.581 complies
- 121.587 designs in compliance; operator procedures CHDO
- 121.589 designs in compliance; operator procedures CHDO
- 121.652 "high limit" minima jointly apply and applied time is mutually creditable to ATR-42 and ATR-72 PIC; CHDO

## MISCELLANEOUS

### a. ADVISORY CIRCULARS

- 1) AC 00-50A - Low Level Wind Shear - Aircraft operating procedures are consistent with this AC. - Windshear alerting and flight guidance systems were not evaluated on the ATR-42 ATR-72, reference § 121.358.
- 2) AC 91-6A - Water, Slush, and Snow on Runway - Aircraft systems and procedures are consistent with this AC.
- 3) AC 91-53 - Noise Abatement Departure Profile - Aircraft systems and procedures are consistent with this AC.
- 4) AC 120-28C - Category III - AFM provisions for the ATR-42 ATR-72 do not address Category III requirements at this time. Cat III is not currently authorized for the ATR aircraft.
- 5) AC 120-29 - Category II - Aircraft systems and procedures are consistent with this AC. AFM and MMEL include reference to configurations approved. As addressed by standard operations specifications.
- 6) AC 120-33 - Navigation Systems For Approval in MNPS - Aircraft systems and procedures are consistent with this AC. No change from the original ATR-42 ATR-72 FSB report.
- 7) AC 120-35A - LOFT - Aircraft systems and procedures, and training, checking, and currency identified by the FSB are consistent with this AC. Specific provisions related to LOFT are addressed by paragraph 6.4.3.2 of this report.
- 8) AC 120-38 - Cabin Ozone Concentrations - The ATR-42 ATR-72, as evaluated, are consistent with respect to this AC.

### b. FAA DIRECTIVES, POLICIES, AND US AERONAUTICAL INFORMATION MANUAL:

- 1) The ATR-42 ATR-72 are considered large aircraft, but are not considered "heavy" aircraft.