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Flight Standardization Board (FSB) Report

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Beechcraft Corporation BE-1900 Models 1900/1900C/1900D

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RECORD OF REVISIONS

Revision Number	Sections	Date	Chairman
1900/1900C (Original)		11/30/1983	Argil L. Axford
1900D (Original)	All	04/16/1992	Kenneth W. Davis
1	All	09/28/2010	Johnathon A. Vetter
2	Appendix 4	02/28/2011	Johnathon A. Vetter
3	7, 10, App. 1 and 2	10/05/2012	Johnathon A. Vetter
4	2.1, 3.1.1, 10.2.6, 11	12/17/2014	Johnathon A Vetter
5	5.2.2, 6.1.2, 6.2.1	09/28/2016	Johnathon A Vetter

Highlights of Changes:

- Revision 1: --Consolidate 1900/1900C and 1900D FSB Reports into current FSB Report Format.
--Publish 1900C and 1900D Compliance Checklist for 121 Delayed Compliance Rules per 14 CFR §121.2.
--Publish 1900D to 1900/1900C MDR and ODR.
- Revision 2: --Revise BE-1900D Delayed Compliance with 121.293.
- Revision 3: --Rockwell Collins IDS-3000 Flight Display Retrofit (STC # SA00748DE) differences.
--Add specifications for currency to maintain and reestablish currency.
--Add MDR NOTE and ODR Table for IDS-3000.
- Revision 4: --Amend Section 1 removing acronym list.
--Add G950 to 2.1 Type Rating Background Summary.
--Add delineation to Instrument Approach Strait in Approach Category to 3.1.1.
--Add G950 Electronic Charts to 10.2.6.
--Update recommendations for FSTD to 14 CFR part 60 in 11.1.
--Add G950 to MDR NOTES and ODR (STC # SA02309SE).
- Revision 5: --Add statement for non-applicable tasks to Training per 121 Appendix E requirements.
--Correct 6.1.2 to correlate to 3.1.5 and 3.1.6.
--Delete noncompliant sentence in 6.2.1, Oral Examination.

CONTENTS

SECTION	PAGE
RECORD OF REVISIONS.....	2
CONTENTS	3
1. PURPOSE AND APPLICABILITY.....	4
2. PILOT TYPE RATING DETERMINATION.....	5
3. MASTER REQUIREMENTS.....	7
4. ACCEPTABLE DIFFERENCE REQUIREMENTS	8
5. FSB SPECIFICATIONS FOR TRAINING.....	8
6. FSB SPECIFICATIONS FOR CHECKING.....	12
7. FSB SPECIFICATIONS FOR CURRENCY.....	14
8. FSB SPECIFICATIONS FOR IOE/SOE.....	14
9. ADDITIONAL FINDINGS AND RECOMMENDATIONS (Reserved).....	15
10. AIRCRAFT REGULATORY COMPLIANCE	15
11. FSB SPECIFICATIONS FOR TRAINING DEVICES AND SIMULATORS.....	16
12. APPLICATION OF FSB REPORT	16
13. ALTERNATE MEANS OF COMPLIANCE	16
APPENDIX 1. MASTER DIFFERENCE REQUIREMENTS (MDR) TABLE	
APPENDIX 2. SAMPLE DIFFERENCE REQUIREMENTS	
APPENDIX 3. SAMPLE ACCEPTABLE TRAINING PROGRAM (Reserved)	
APPENDIX 4. AIRCRAFT COMPLIANCE CHECKLISTS	

1. PURPOSE AND APPLICABILITY

- 1.1 This Flight Standardization Board (FSB) report specifies master training, checking, and currency requirements applicable to crews operating Beechcraft Corporation (BC) Model 1900 (BE-1900) aircraft. This report provides guidance to operators under 14 CFR part 61, 91, 135, and 121, FAA Principal Inspectors, Part 142 Training Centers, Part 141 Approved Schools, and other training providers.

NOTE: All regulatory references within this report are found in Title 14 of the Code of Federal Regulations (14 CFR) unless otherwise indicated.

The BE-1900 Flight Standardization Board (FSB) Report addresses training, checking, and currency requirements for pilots operating BE-1900 type rated aircraft. The FSB evaluates operating characteristics and techniques to propose training, checking, and currency requirements applicable to BE-1900 type rated aircraft. The objectives of this FSB are:

- Determination of Pilot Type Rating.
 - Identify training, checking, and currency requirements.
 - Establish Master Common Requirements.
 - Establish Master Difference Requirements.
 - Provide sample Differences Tables.
 - Review AFM and Checklist procedures for operational suitability.
 - Describe acceptable training program and training device characteristics.
- 1.2 This report addresses BE-1900 series aircraft as specified in the FAA Type Certificate Data Sheet (TCDS) # A24CE as Model 1900, 1900C, and 1900D.
- 1.3 The provisions of this Flight Standardization Board (FSB) report are effective until amended, superseded, or withdrawn by subsequent revisions to this report.
- 1.4 Determinations made in this report are based on the evaluations of specific BE-1900 aircraft 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 CFR, aircraft operating experience, or the testing of new or modified aircraft under the provisions of AC 120-53, Guidance for Conducting and Use of Flight Standardization Board Evaluations and/or Common Procedures Document for Conduction Operational Evaluation Boards, June 10, 2004.
- 1.5 Relationship between this FSB report and an AQP program. Differences between this FSB report and an operator's proposed training, checking, and currency requirements under an Advanced Qualification Program (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 The term “must” is used in this FSB report and (even though AC 120-53 is advisory) indicates the acceptable means determined by the Administrator but not necessarily the only means of compliance with 14 CFR part 61, 91, 135, and 121 training requirements. This terminology acknowledges the need for operators to fully comply with this FSB report and MDR and ODR provisions if AC 120-53 is to be used by the operator as the means of complying with 14 CFR part 61, 91, 121, 135. Operators who choose this method must comply with each applicable MDR provision, including any footnotes.

2. PILOT TYPE RATING REQUIREMENTS

2.1 Type Rating Background Summary.

Models 1900 and 1900C were evaluated November 14–18, 1983, by the FSB with Report dated November 30, 1983. Model 1900 and 1900C received Type Design Approval with TCDS A24CE to SFAR 41 design requirements on November 22, 1983.

The FSB evaluated the 1900 statically and in flight through all maneuvers required by 14 CFR part 61 Appendix A, including night operations using S/N UA-3. The consensus of the FSB was the Model 1900/1900C required a type rating in accordance with 14 CFR 61.31. The Model 1900/1900C is a derivative model of TCDS A24CE that includes other models less than 12,500 pounds that do not require a pilot type rating. The Model 1900/1900C is the first model on TCDS A24CE to receive a pilot type rating designation. Pilots completing a Practical Test in the Model 1900/1900C are issued the “BE-1900” pilot type rating.

Model 1900/1900C is designated “BE-1900” pilot type rating on January 9, 1984.

SUMMARY NOTE: The Model 300 pilot type rating was added as the same “BE-1900” pilot type rating February 7, 1984. The pilot type rating was subsequently revised December 6, 1984 to a common pilot type rating “BE-300, BE-1900” for Models 300, 1900, and 1900C. The Model 300LW was added to the common pilot type rating “BE-300, BE-1900” on June 17, 1988. The Model B300 was added to the common pilot type rating “BE-300, BE-1900” on February 15, 1990. The “BE-300, BE-1900” pilot type rating was issued to pilots for a Practical Test completed in any of the five models until November 6, 1991. After November 6, 1991, the BE-300 and BE-1900 are issued as separate pilot type ratings.

Model 1900D was evaluated September 30, 1991, with FSB Report dated April 16, 1992. Model 1900D received Type Design Approval with TCDS A24CE to 14 CFR part 23 Commuter Category design requirements on March 19, 1991.

The FSB determined to evaluate the Model 300, B300, 1900C, and 1900D differences due to the continuing development of new models on TCDS A24CE. October 8, 1991, the FSB recommend the “BE-300, BE-1900” common pilot type rating be split with the addition of the Model 1900D. The Model 1900D is given the same pilot type rating “BE-1900” with the Model 1900 and 1900C. Pilot with the common pilot type rating “BE-300, BE-1900” retain both pilot type ratings. Pilots completing a Practical Test in Models 1900, 1900C, or 1900D are issued the “BE-1900” pilot type rating.

The Models 1900, 1900C, and 1900D are designated the “BE-1900” pilot type ratings on November 6, 1991.

The BE-1900 FSB evaluated IDS-3000 retrofit to Proline 2 equipped Model 1900D on February 21–24, 2012, at Hawker Beechcraft Services in Wichita, KS. Differences Levels are established for the IDS-3000 retrofit approved with STC # SA00748DE issued October 5, 2012.

The BE-1900 FSB evaluated installation of Garmin G950 replacing Proline 2 equipped Model 1900D on February 25–28, 2014, for AeroMech Incorporated. Differences Levels are established for the G950 installation approved with STC # SA02309SE issued May 16, 2014.

2.2 Pilot Type Rating Determination.

- 2.2.1 Type Rating. In accordance with the provisions of 14 CFR parts 61, 121, 135, AC 120-53, and the Common Procedures Document, a specific pilot type rating is assigned to the BE-1900 aircraft and is designated “BE-1900”. This BE-1900 Type Rating designation is applicable to Beechcraft Corporation Models 1900, 1900C, and 1900D.
- 2.2.2 Second-In-Command (SIC) Type Rating. In accordance with the provisions of 14 CFR §61.55, FAA Order 8900.1 Volume 5 Chapter 2, and AC 120-53, a SIC pilot type rating is assigned to Models 1900/1900C/1900D and designated “BE-1900” with Limitation “BE-1900 SIC Privileges Only”.
- 2.2.3 SIC Required Limitation on Type Rating. In accordance with the provisions of 14 CFR §61.43(b)(3), FAA Order 8900.1 Volume 5 Chapter 2, and AC 120-53, a pilot type rating may be issued with Limitation “BE-1900 Second-In-Command Required” for the BE-1900 designated “BE-1900”.
- 2.2.4 Removing SIC Required Limitation. Removing a “Second-in-Command Required” limitation issued in accordance with provisions of 14 CFR §61.43(b)(3), FAA Order 8900.1, and AC 120-53A may be accomplished with a partial practical test in accordance with FAA Order 8900.1, Volume 5, Chapter 2, Section 19, or 8900.2, General Aviation Airman Designee Handbook (as amended).

3. MASTER REQUIREMENTS

3.1 Common Requirements (All BE-1900s).

3.1.1. Landing Minima Categories, 14 CFR §97.3. The 1900/1900C and 1900D are considered Category B for the purposes of determining “straight-in landing weather minima” when “Flaps Landing” or “Flaps 35” configuration is used for landing. The 1900/1900C and 1900D are considered Category C for the purposes of determining “straight-in landing weather minima” when “Flaps Approach” or “Flaps 17” configuration is approved by STC and used for Normal landing. The approach speed to determine approach category is V_{Ref} at maximum landing weight (SAFO 12005 and 14 CFR §97.3 Legal Interp, DeCleene, May 28, 2013) and correspondent to stabilized approach procedures. Stabilized approach procedures for SFAR 41 1900/1900C may differ from ICAO Annex 8 1900/1900C and 1900D due to approach climb performance requirements.

For circling approaches, “Flaps 17” for 1900D and “Flaps Approach” for 1900/1900C are used. The circling minima to be used are as specified in operations specifications for each operator as follows:

- a) For operators with Operations Specifications, circling minimums are as specified for the actual approach speed (KIAS) being used for a circling maneuver, or
- b) If Operations Specifications have not been issued, circling minimums are Category C.

3.1.2. Normal “Takeoff Flap Setting” is “Flaps Up”, “Flaps Takeoff”, or “Flaps Approach” for 1900/1900C and “Flaps Up” or “Flaps 17” for 1900D.

3.1.3 Normal “Final Landing Flap Setting”, 14 CFR §91.126 (c). The normal “final landing flap setting” per 14 CFR §91.126 (c) is considered to be “Flaps Landing” for 1900/1900C and “Flaps 35” for 1900D. Landing with flaps other than these “Final Landing Flap Setting” is an Abnormal Procedure by Type Design.

3.1.4 “No Flap” Approach and Landing and “Jammed Stabilizer” are not waived. Training and Checking are in accordance with existing requirements.

3.1.5 Special/Unique Requirements. The 1900D has Reduced Power Normal Takeoff for “Flaps 17” and specific conditions per the AFM.

3.1.6 Specific Flight Characteristic. Specific Flight Characteristic for stall warning with ice accumulation is airframe buffet in lieu of audible stall warning reliability.

3.2 Master Difference Requirements.

3.2.1 Master Difference Requirements Tables. Master Difference Requirements (MDRs) for related aircraft of the BE-1900 are shown in Appendix 1. These provisions apply when differences between related aircraft exist which affect crew knowledge, skills, or abilities related to flight safety (e.g., Level A or greater differences).

- 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 basic designation, or more restrictive than the basic designation, depending on the significance of the differences between related aircraft.

4. ACCEPTABLE OPERATOR DIFFERENCE REQUIREMENTS (ODR) TABLES

- 4.1 ODR Tables. ODR tables are used to show an operator’s compliance method. ODR tables for operators conducting mixed fleet operations using the BE-1900/1900C and BE-1900D are shown in Appendix 2. The ODR tables represent an acceptable means to comply with MDR provisions based on those differences and compliance methods shown. The tables do not necessarily represent the only acceptable means of compliance for operators with airplanes having other differences where compliance methods (e.g., devices, simulators) are different. For operators flying the BE-1900/1900C and the BE-1900D, the ODR tables in Appendix 2 have been found acceptable, and therefore, may be approved by a POI for a particular operator.
- 4.2 Operator Preparation of ODR Tables. Operators flying a “mixed fleet” of BE-1900 and other 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 BE-1900 aircraft between various operators and compatibility of each ODR table with MDR provisions.
- 4.4 ODR Table Distribution. Original FAA approved ODR tables based on the Sample Differences 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 BE-1900 FSB Chairman at the applicable AEG.

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 previous experience in multi-engine turbo-propeller powered airplanes. For airmen not having this experience, additional requirements may be appropriate, as determined by the POI, FSB, and/or AFS-200.
- 5.1.2 Training for Seat Dependent Tasks. Accomplishment of certain tasks, procedures, or maneuvers requires training of a crewmember for a particular crew position (e.g., captain, first officer, check pilot). 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 should be in accordance with ODR tables when applicable.

5.1.3 Second-In-Command Training Tasks. Flightcrew members qualifying to serve as SIC must accomplish certain tasks, procedures, or maneuvers for the SIC crew position. Training programs should address all training elements of 14 CFR part 135 and part 121 as applicable and/or in accordance with FAA Order 8900.1 Volume 5 Chapter 2. SIC Pilot Type Rating may be issued in accordance with 14 CFR §61.55(d) or (e) provided training required by 14 CFR §61.55 and FAA Order 8900.1 Volume 5 Chapter 2, including tasks stipulated by this report, are completed.

5.2 Pilots Initial, Transition, and Upgrade Training.

5.2.1 Pilots Initial, Transition, and Upgrade Ground Training, 14 CFR §121.419 or 135.345. Initial, transition, or upgrade ground training for the BE-1900 is accomplished as specified by 14 CFR §121.419 (135.345). No unique provisions or requirements are specified. Training program hours may be reduced as specified in 14 CFR §121.405.

5.2.2 Pilots Initial, Transition, and Upgrade Flight Training. Initial, transition, or upgrade flight training for the BE-1900 is accomplished as specified by 14 CFR §121.424 or §135.347. No unique provisions or requirements are specified. Training program hours may be reduced as specified in 14 CFR §121.405. Requirements of 14 CFR part 121 Appendix E are applicable except as follows.

The following Maneuvers/Procedures are not applicable to the BE-1900 airplane:

III. Flight Maneuvers:

- (a) Turns with spoilers.
- (b) Tuck and Mach Buffet.
- (d) Operation of Flight Engineer Station.
- (f) (9) Autopilot (if not installed).
- (g) (4) Fuel Jettisoning.

IV. Landings:

- (i) Manual Reversion.

5.2.3 Crewmember Emergency Training. Crewmember emergency training should be conducted for the BE-1900 in accordance with 14 CFR §121.417 and §135.331. The objective of emergency training for the BE-1900 aircraft 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 BE-1900 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 14 CFR §121.417 or §135.331 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 the BE-1900, 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 BE-1900.

In accordance with 14 CFR §121.417 or §135.331 and FAA Order 8900.1 Volume 3 Chapter 19, 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 BE-1900 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 the BE-1900 aircraft. An example of aircraft-specific emergency training is instruction on the location of emergency equipment for each related aircraft of the BE-1900 aircraft.

As part of an approved training program, an operator may use many methods when conducting aircraft-specific emergency training, including classroom instruction, pictures, videotape, and 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 FAA Order 8900.1 Volume 3 Chapter 19 provides "national norms" for the approval of the general emergency training program hours. The complexity of the different related aircraft of the BE-1900 and the complexity of the type of operation to be conducted should be considered when approving the BE-1900 aircraft-specific emergency training.

5.2.4 Areas of Emphasis. The following areas of emphasis should be addressed during ground and flight training (examples follow):

- a) 1900D: EFIS function and procedures should be emphasized throughout training. Special significance should be placed on Display Processor Unit (DPU) failures and EFIS Reversionary Switching. Use of Composite Mode should be trained to conduct Precision and Non-Precision Approaches, with and without the Flight Director.
- b) 1900/1900C/1900D: Aircraft performance must be emphasized. The 1900/1900C (SFAR 41) and 1900D (Commuter Category) are certificated to very different performance requirements. There must be a thorough understanding of the respective aircraft performance in mixed fleet flying.
- c) 1900D: Training in the use of Reduced Power Takeoffs must be emphasized. A good understanding of AFM criteria to conduct Reduced Power Takeoffs is necessary.

- d) BE-1900 Specific Flight Characteristic for stall warning with ice accumulation is airframe buffet in lieu of audible stall warning reliability.

5.2.5 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). 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 ODR tables when applicable.

Procedures which have Seat Dependent Elements applicable to both seats when operating with a two-pilot crew include the following:

- a) Cockpit Preflight.
- b) Rejected Takeoff.
- c) Engine Fire and Failure During Takeoff after V₁.
- d) Abnormal Procedures for One-Engine-Inoperative and Landing.
- e) Manual Gear Extension.

5.2.6 Second-In-Command Crew Training. SIC crew training is accomplished as specified in 14 CFR §61.55, part 135, or part 121. Approved training programs should address tasks stipulated in FSB Specifications for Training; Areas of Emphasis, Training for Seat Dependent Tasks, and SIC Crew Training.

5.3 Differences Training (14 CFR §121.418 or §135.347).

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. These ODR tables are provided as generic, and therefore, may not include items that are applicable to particular operators.

- a) A Differences Training Program prerequisite is 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.

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 (14 CFR part 121, Subpart Y), “flight

qualification events” must be consistent with items specified by the applicable ODR tables.

5.4 Recurrent Training.

5.4.1 Recurrent Ground Training. Courses must include appropriate training in accordance with 14 CFR §121.427 or §135.351 for each related BE-1900 aircraft as specified by MDR and ODR tables for differences training.

5.4.2 Recurrent Flight Training. Courses require appropriate maneuvers and procedures identified in 14 CFR part 121, Appendix F, 14 CFR §135.351, or as otherwise described in this report in accordance with 14 CFR part 121, Subpart Y. Maneuvers and procedures must account for differences between each related BE-1900 aircraft operated. The ODR table(s) must identify the differences.

5.4.3 Recurrent training consideration for Mixed Fleet Flying Operations. When 1900/1900C/1900D Mixed Fleet Flying Operations are conducted, a plan for recurrent training and checking must address aircraft differences.

5.4.4 Training program hours for Recurrent Training may be reduced as specified in 14 CFR §121.405.

5.4.5 Substitution for Recurrent Flight Training may be granted as specified in 14 CFR §135.351(c) provided all tasks specified for Recurrent Flight Training are accomplished.

5.5 Other Training.

5.5.1 LOFT Programs (14 CFR §121.409(b)(3)). When operators have LOFT programs and several related BE-1900 aircraft, POIs should review LOFT credits to assure suitability for each related BE-1900 aircraft.

6. FSB SPECIFICATIONS FOR CHECKING

6.1 General.

6.1.1 Checking Items. Pertinent knowledge, procedures, and maneuvers specified by 14 CFR part 61, FAA Practical Test Standards (PTS), 14 CFR part 135, and 14 CFR part 121 Appendix F pertinent to multi-engine turbo-propeller airplanes apply.

6.1.2 Specific Flight Characteristics. Specific Flight Characteristics are applicable to the Model 1900 as specified in 3.1.6 and 3.1.5 Special/Unique Requirements must be considered.

- 6.1.3 Areas of emphasis. The following areas of emphasis should be addressed during checks:
- Aircraft Performance calculation and aircraft handling to achieve performance.
 - For 1900D, selection and use of EFIS displays, raw data, flight director, and Reversion/Composite modes, including DPU failure, should be demonstrated.
- 6.1.4 No Flap Landings. Demonstration of a No Flap approach and landing during a 14 CFR part 61, 135, or 121 Appendix F check is appropriate. In accordance with FAA Order 8900.1 Volume 5 Chapter 3, when the flight test is conducted in the airplane in actual flight, a touchdown from a no flap is not required. However, the performance and handling of the Model 1900 is such that it is acceptable to conduct No Flap Landings to a full stop.
- 6.2 Type Ratings.
- 6.2.1 Oral Examinations. Oral test items need only address the model for which the test is being conducted when qualification is sought on only one particular variation of Model 1900.
- 6.2.2 Practical Tests. The satisfactory completion of a practical type rating evaluation in any BE-1900 will meet the requirement for the BE-1900 type rating. In order to operate another related aircraft, crewmembers operating under 14 CFR part 121 or 135 are required to satisfactorily comply with the requirements of the MDR and ODR tables in Appendices 1 and 2. The same requirement should be followed by flightcrew members operating under 14 CFR parts 91 or 125.
- 6.2.3 Application for and Issuance of Type Ratings. Airmen meeting pertinent 14 CFR part 61 requirements in a BE-1900 in accordance with FSB requirements described in this report may apply to the FAA for the BE-1900 type rating endorsement. Upon completion of required tests, and submission of an application (FAA Form 8710-1, Airman Certificate and/or Rating Application), authorized FAA inspectors or designees may issue the necessary pilot certificate with type rating.
- 6.3 Proficiency Checks.
- 6.3.1 General. Proficiency Checks for the BE-1900 are administered as designated in 14 CFR §121.441 and part 121 Appendix F or §135.293/297. These checks must be administered by an authorized check pilot or FAA Aviation Safety Inspector. A proficiency check in either the BE-1900/1900C or BE-1900D suffices for the BE-1900 type rating provided the check is administered by an Aircrew Program Designee or FAA Aviation Safety Inspector. Satisfactory completion of a proficiency check may be substituted for recurrent flight training as permitted in 14 CFR §121.433(c).
- 6.3.2 Proficiency Checks for Mixed Fleet Flying. Proficiency Checks for Mixed Fleet Flying should alternate checks each 6 months for PICs and annually for SICs between 1900/1900C and 1900D aircraft. Aircraft Differences must be addressed in accordance with the MDR and ODR tables for that operator.

7. FSB SPECIFICATIONS FOR CURRENCY

- 7.1 Recency of Experience Required by 14 CFR §§121.439, 135.247, and 61.57. Model 1900 Recency of Experience is inclusive of 1900/1900C and 1900D provided training, checking, and currency requirements are maintained in accordance with the MDR and ODR Tables. Landing currency is common to all 1900 models.
- 7.2 Currency for Mixed Fleet Flying Operations. Currency levels are shown in MDR/ODR tables (Appendix 1).
 - 7.2.1 Level B Currency: When MDR/ODR specifies Level B Currency, currency is maintained by operating the particular variation of airplane within the previous 180 days. Currency may be reestablished by a review of Placards, Limitations, and Operating Procedures prior to operating the particular variation of airplane.
 - 7.2.2 Level C Currency: When MDR/ODR specifies Level C Currency, currency is maintained by operating the particular variation of airplane through a complete flight cycle including an instrument approach procedure within the previous 90 days. Currency may be reestablished by operating the particular variation of airplane with a qualified PIC for at least one flight cycle segment, completing a Line Check with a Line Check pilot, completing a Proficiency Check in the particular variation of aircraft, or compliance with 14 CFR §61.57(c) or (d) recent flight experience requirements in the variation of airplane.

8. FSB SPECIFICATIONS FOR OE/SOE

- 8.1 Operating Experience (14 CFR §121.434 and AC 120-53).
 - 8.1.1 Operating Experience Pertinent to Each Flightcrew Member. Operating experience must be obtained while serving in a primary crew position. PIC Operating Experience must be conducted in the left pilot seat. SIC Operating Experience should be conducted in the right pilot seat. This stipulation is consistent with Seat Dependent Task Training Elements.
 - 8.1.2 Operating Experience for Mixed Fleet Flying Operations. Operating experience for the BE-1900 may be accomplished in any related BE-1900 aircraft provided training, checking, and currency requirements are maintained in accordance with the MDR and ODR Tables.
 - 8.1.3 Supervised Operating Experience (SOE). SOE required for a PIC Type Rating in accordance with 14 CFR part 61 pilot certification must be accomplished from the left pilot seat. SOE required by pilot certification should include all preflight planning, normal operating procedures, and include one complete operating cycle for each 2 hours of SOE. One complete operating cycle includes Start, Taxi, Takeoff, Approach, Landing, Shutdown procedures.

9. ADDITIONAL FINDINGS AND RECOMMENDATIONS (Reserved)

10. AIRCRAFT REGULATORY COMPLIANCE

10.1 Compliance Checklist (see Appendix 4).

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 the FAA for aircraft having a particular aircraft type certificate. The checklist also notes rules or policies not demonstrated to the FSB, which must be demonstrated to CHDOs by operators.

10.2 Discussion of Specific Compliance Items.

10.2.1 BE-1900 Observer Seat. The BE-1900 aircraft do not have a dedicated Forward Observer Seat in original type design. The left forward passenger seat in a 19 passenger seat configuration complies with the observer seat requirements of 14 CFR §121.581 and §135.75 by utilizing the most forward passenger seat, passenger oxygen mask with the addition of audio capability at the seat location. This most forward passenger seat location is adequate for Enroute Inspection and Line Checks per 14 CFR §121.440 and §135.299. The completion of Proficiency Checks or Pilot Type Rating Practical Tests may require additional equipage. For Single Pilot evaluations, the right pilot seat is an available observer seat.

10.2.2 Emergency Evacuation. The Model 1900 has a maximum passenger seating capacity of 19 passengers. The Model 1900 maximum passenger seating capacity is below the number required by 14 CFR §121.291 to accomplish an Emergency Evacuation Demonstration.

10.2.3 Ditching. The Model 1900 has not been demonstrated for Ditching in accordance with 14 CFR part 121 Appendix D. The Model 1900 is not certificated for ditching under the ditching provisions of 14 CFR part 25.

10.2.4 Proving Tests, 14 CFR §121.163 or §135.145. Proving tests in accordance with 14 CFR §121.163 or §135.145 are appropriate in accordance with FAA Order 8900.1, Volume 3 Chapter 29 when the BE-1900 is new to a particular operator. Proving test requirements and reductions are as designated by FAA Order 8900.1 Volume 3 Chapter 29 and the CHDO, or as otherwise specified by the FSB or AFS-200.

10.2.5 Electronic Flight Bag (IFIS-5000 FSU) For BE-1900 aircraft with IDS-3000 installation, a single source File Server Unit provides EFB functions. With single MFD, FSU and CCP dual redundancy is not met. Additional electronic equipment is required to comply with 14 CFR §§91.503, 135.83, 121.117, or 121.549.

10.2.5.1 Electronic Checklist. Printed Pilot Checklist is required to comply with 14 CFR §91.503, §135.83, or part 121. No electronic checklists have been evaluated for this aircraft.

- 10.2.5.2 Electronic Charts. Electronic Approach Charts (SIDS, STARS, Approach Procedures) are available through the IFIS-5000 File Server Unit. Dual redundancy is required for a suitable source of electronic aeronautical information. The enhanced map overlays do not meet requirements for Enroute Charts, and therefore, another suitable source of Enroute Chart information must be available at the pilot station.
- 10.2.6 Electronic Flight Bag (G950) For 1900D aircraft with the G950 installation a single MFD provides EFB chart functions. With single MFD, dual redundancy is not met. Additional electronic equipment is required to comply with 14 CFR §§ 91.503, 135.83, 121.117, or 121.549.

Electronic Charts is a single source of Aeronautical Information limited to IAPs only (SID, STAR, Approach procedures). No enroute charts are available.

11. FSB SPECIFICATIONS FOR DEVICES AND SIMULATORS

- 11.1 Device and Simulator Characteristics. Requests for device qualification for training should be made in accordance with FAA procedures. Legacy device and simulator characteristics are designated in AC 120-40 and AC 120-45 (as amended). New Flight Training Device and Flight Simulator characteristics must comply with applicable 14 CFR part 60. Credit for training, checking, and currency in an approved Flight Simulation Training Device (FSTD) is allowed in accordance with the Simulator Task Credit given in accordance with Airline Transport Pilot and Aircraft Type Rating Practical Test Standards or current guidance in FAA Order 8900.1 Volume 3 Chapter 19, as applicable, except where this report is more restrictive. The acceptability of differences between devices, simulators, and aircraft must be addressed by the POI.
- 11.2 Device Approval. Requests for device approval should be made to the POI/TCPM. The POI/TCPM may approve these devices for that operator if their characteristics clearly meet the established FAA criteria and have been qualified by the National Simulator Program (NSP).

12. APPLICATION OF FSB REPORT

- 12.1 Relevant parts of this report (e.g., Type Rating Designation, checking maneuvers) are effective when the report is approved by the FAA.

13. ALTERNATE MEANS OF COMPLIANCE

- 13.1 Approval Level and Approval Criteria. Alternate means of compliance to this report must be approved by the FSB. 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 and this FSB report. Analysis, demonstrations, proof of concept testing, differences documentation, or other evidence may be required.

- 13.2 Equivalent Safety. In the event alternate means of 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. 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 evaluation.
- 13.3 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 to be “unforeseen circumstances” for the purposes of this provision.

APPENDIX 1

MASTER DIFFERENCE REQUIREMENTS (MDR) TABLE

Type Rating: BE-1900		FROM AIRPLANE		
		BE-1900/1900C	BE-1900D	
T O A I R P L A N E	BE-1900/1900C	B/B/B 1	C/B/B	
	BE-1900D	D/C/C	B/B/B 2, 3, 4	

NOTES

- 1) Differences within the 1900/1900C are the Fuel System and specific aircraft equipage.
- 2) Differences within 1900D are specific aircraft equipage.
- 3) Differences for IDS-3000 installation are D/D/C.
- 4) Differences for G950 installation are D/D/C.

APPENDIX 2

ACCEPTABLE OPERATOR DIFFERENCE REQUIREMENTS (ODR) TABLES

Definitions Used in the Tables	
X	= Pilot's Operating Handbook and/or Flight Manual Supplement
AI	= Aided Instruction
CBT	= Computer-Based Training
CPT	= Cockpit Procedures Trainer
ICBT	= Interactive Computer-Based Training
FTD	= Flight Training Device (Level 1 to 7)
FFS	= Full Flight Simulator (Level A, B, C, D)

SAMPLE DIFFERENCES TABLE				COMPLIANCE METHOD					
DIFFERENCE AIRCRAFT: BE-1900D									
BASE AIRCRAFT: BE-1900/1900C				TRAINING				CHKG/CURR	
DESIGN	REMARKS	FLT CHAR	PROC CHNG	LVL A	LVL B	LVL C	LVL D	CHK	CURR
General Airplane Configuration	1900/1900C Part 23 and SFAR 41. 1900D Part 23 Commuter Category.	Yes	Yes	X				A	B
Weights	Weights vary slightly by model and modification status, including GW increase.	No	No	X				A	B
Airworthiness Limitations	Numerous changes in system design to address Rotor Burst criteria. Changed Fatigue Life.	No	No	X				A	B
Placards and Markings	Different Placards listed in AFM/POH.	No	No	X				A	B
Servicing	Similar.								
Engines	1900/1900C has PT6A-65B. 1900D has PT6A-67D.	Yes	Yes		X			B	B
Flight Deck	Wide center pedestal, Revise Overhead Panel, Various Instrument Panel Changes.	No	No	X				A	B
Instrument Panel Layout	1900D has Collins EFIS-84.	No	Yes				FFS	C	C
Cabin	New interior design but same max. pax. configuration.	No	No	X				A	B
Flight Controls	1900D adds Aileron Rudder interconnect and Rudder Boost option. 1900/1900C has Power Steering option.	Yes	Yes		X			B	B
Aerodynamic Controls	1900/1900C have 4 position Flaps. 1900D has 3 position Flaps.	Yes	Yes				FFS	C	C
Preflight	Various Exterior, Interior and Cockpit changes.	No	Yes		X			B	B

SAMPLE DIFFERENCES TABLE				COMPLIANCE METHOD					
DIFFERENCE AIRCRAFT: BE-1900D									
BASE AIRCRAFT: BE-1900/1900C				TRAINING				CHKG/CURR	
DESIGN	REMARKS	FLT CHAR	PROC CHNG	LVL A	LVL B	LVL C	LVL D	CHK	CURR
Engine Start	Start procedures and characteristics.	No	Yes		X			B	B
Taxi	Early 1900/1900C had Power Steering.	Yes	Yes		X			B	B
Takeoff	1900/1900C Takeoff Distance is to 50 feet with no Accelerate Stop consideration. 1900D Takeoff Distance is to 35 feet and considers factors listed in AFM. 1900D has Reduced Power Takeoff.	Yes	Yes				FFS	C	C
RTO or V ₁ Fail	1900D has Accelerate/Stop Performance and Takeoff Flight Path gradient required.	Yes	Yes		X			B	B
Climb Cruise Descent	1900D Performance includes Takeoff Flight Path requirements.	Yes	Yes		X			B	B
Instrument Approaches	EFIS-84 navigation information display.	Yes	Yes				FFS	C	C
Landing	Use of V _{Ref} for landing and Bailed Landing.	Yes	Yes		X			B	B
Normal Procedures	Preflight, Takeoff, Landing, Go-Around.	Yes	Yes				FFS	C	C
Abnormal Procedures	EFIS-84 Reversion/Composite/FD.	No	Yes				FFS	C	C
Emergency Procedures	Aircraft Performance Profile and various Emergency Procedures.	No	Yes		X			B	B
In-Flight Maneuvers	Similar.								
21 Air Conditioning	Increased Max Differential Pressure and changes to Bleed Air, Environmental Air, and Pressurization components.	No	No		X			B	B
22 Autoflight	1900D optional APS-65 Autopilot. 1900C optional SPZ-2000 or SPI-4000.	No	Yes		X			B	B
23 Communications	Upgraded Collins Communications Radios and CVR.	No	No	X				A	A
24 Electrical Power	Dual AC Buss System.	No	Yes		X			B	B
25 Equipment/Furnishings	New Interior.	No	No	X				A	A
26 Fire Protection	Changes in Firewall and Aft Nacelle.	No	No	X				A	A

SAMPLE DIFFERENCES TABLE				COMPLIANCE METHOD					
DIFFERENCE AIRCRAFT: BE-1900D									
BASE AIRCRAFT: BE-1900/1900C				TRAINING				CHKG/CURR	
DESIGN	REMARKS	FLT CHAR	PROC CHNG	LVL A	LVL B	LVL C	LVL D	CHK	CURR
27 Flight Controls	Add Aileron Rudder interconnect and Rudder Boost option. Dual Pushrod Trim Tabs, Optional Electric Trim without AP.	Yes	Yes		X			B	B
28 Fuel	1900 fuel system has bladder fuel cells, 1900C fuel system changes to wet wings, 1900D has changes to fuel venting to accommodate wing tip extension.	No	No	X				A	A
29 Hydraulic	Similar.								
30 Ice/Rain	Additional Deice Boot coverage, Deice Annunciators, and Pitot Heat Annunciator System.	No	Yes		X			B	B
31 Indicating/Recording	Upgrade FDR standard, Revised Annunciator Panel.	No	No	X				A	A
32 Landing Gear	Revise Gear Position Indicators (various).	No	No	X				A	A
33 Lights	Add Dual Position Lights, New EL Panel Lighting.	No	Yes		X			B	B
34 Navigation	Upgraded Collins Navigation Radios and EFIS-84 Displays, Standby Attitude Indicator.	Yes	Yes				FFS	C	C
35 Oxygen	New Crew Mask Container and Mask Mic.	No	Yes			FTD		B	B
36 Pneumatics	Changes in Bleed Air Pressure and Vacuum readings.	No	Yes	X				A	A
37 Vacuum	Vacuum Flight Instruments removed on Right Side.	No	Yes		X			B	B
38 Waste/Water	N/A.								
45 Maintenance Computer	N/A.								
46 Information Systems	N/A.								
49 APU	N/A.								
52 Doors	Larger Airstair, Cargo, and Emergency Exit Doors.	No	No	X				A	A
53 Fuselage	Oval Cabin Shape for Standup Cabin.	No	No	X				A	A

SAMPLE DIFFERENCES TABLE				COMPLIANCE METHOD					
DIFFERENCE AIRCRAFT: BE-1900D									
BASE AIRCRAFT: BE-1900/1900C				TRAINING				CHKG/CURR	
DESIGN	REMARKS	FLT CHAR	PROC CHNG	LVL A	LVL B	LVL C	LVL D	CHK	CURR
54 Nacelles/Pylons	Changed Nacelle Firewall and Aft Nacelle.	No	No	X				A	A
55 Horizontal and Vertical Stabilizer	Twin Ventral Fins and larger Taillets.	Yes	No		X			B	B
56 Windows	Taller cabin windows and New cockpit sun visor.	No	No	X				A	A
57 Wings	Wing tip extensions and winglets, vortex generators on outboard flaps.	No	No	X				A	A
61 Propellers	Composite blade construction with nickel leading edge.	No	No	X				A	A
71 Powerplant	New engine truss and New Autofeather annunciators.	No	Yes		X			B	B
72 Engine (Turbine)	PT6A-67D engines (PT6A-65B 1900/1900C).	No	Yes		X			B	B
73 Fuel Controls	PT6A-67D has Duplex Fuel nozzles.	No	No		X			A	B
74 Engine Ignitions	Similar.								
75 Engine Bleed Air	Similar.								
76 Engine Controls	Similar.								
77 Engine Indicating	Similar.								
78 Exhaust	Larger constant area Exhaust Stacks and Heat Dissipation Concerns.	No	No	X				A	A
79 Engine Oil	Similar.								
80 Engine Starting	Similar.								

Differences Requirements

Definitions Used in the Tables	
X	= Pilot's Operating Handbook and/or Flight Manual Supplement
AI	= Aided Instruction
CBT	= Computer-Based Training
CPT	= Cockpit Procedures Trainer
ICBT	= Interactive Computer-Based Training
FTD	= Flight Training Device (Level 1 to 7)
FFS	= Full Flight Simulator (Level A, B, C, D)

SAMPLE DIFFERENCES TABLE				COMPLIANCE METHOD					
DIFFERENCE AIRCRAFT: BE-1900/1900C									
BASE AIRCRAFT: BE-1900D				TRAINING				CHKG/CURR	
DESIGN	REMARKS	FLT CHAR	PROC CHNG	LVL A	LVL B	LVL C	LVL D	CHK	CURR
General Airplane Configuration	1900/1900C Part 23 and SFAR 41. 1900D Part 23 Commuter Category.	Yes	Yes	X				A	B
Weights	Weights vary slightly by model and modification status, including GW increase.	No	No	X				A	B
Airworthiness Limitations	Numerous changes in system design. Changed Fatigue Life.	No	No	X				A	B
Placards and Markings	Different Placards listed in AFM/POH.	No	No	X				A	B
Servicing	Similar.								
Engines	1900/1900C has PT6A-65B. 1900D has PT6A-67D.	Yes	Yes		X			B	B
Flight Deck	Narrow center pedestal, Revise Overhead Panel, Various Instrument Panel Changes.	No	No	X				A	B
Instrument Panel Layout	1900C has mechanical Flight Instruments.	No	Yes			FTD		B	B
Cabin	New interior design but same max. pax. configuration.	No	No	X				A	B
Flight Controls	1900C has no Rudder Boost. 1900/1900C has Power Steering option.	Yes	Yes		X			B	B
Aerodynamic Controls	1900/1900C have four position Flaps. 1900D has three position Flaps.	Yes	Yes		X			A	B
Preflight	Various Exterior, Interior, and Cockpit changes.	No	Yes		X			B	B
Engine Start	Start procedures and characteristics.	No	Yes		X			B	B
Taxi	Early 1900/1900C had Power Steering.	Yes	Yes		X			B	B

SAMPLE DIFFERENCES TABLE				COMPLIANCE METHOD					
DIFFERENCE AIRCRAFT: BE-1900/1900C									
BASE AIRCRAFT: BE-1900D				TRAINING				CHKG/CURR	
DESIGN	REMARKS	FLT CHAR	PROC CHNG	LVL A	LVL B	LVL C	LVL D	CHK	CURR
Takeoff	1900/1900C Takeoff Distance is to 50 feet with no Accelerate Stop consideration. 1900D Takeoff Distance is to 35 feet and considers factors listed in AFM.	Yes	Yes		B			B	B
RTO or V ₁ Fail	1900C has no Accelerate/Stop Performance and Takeoff Flight Path gradient required.	Yes	Yes		X			B	B
Climb Cruise Descent	No Takeoff Flight Path requirements.	Yes	Yes		X			B	B
Instrument Approaches	Mechanical navigation information display.	Yes	Yes			FTD		B	B
Landing	No V _{Ref} for landing.	No	Yes		X			B	B
Normal Procedures	Preflight, Takeoff, Landing, Go-Around.	Yes	Yes		X			B	B
Abnormal Procedures	Similar.	No	No	X				A	A
Emergency Procedures	Aircraft Performance Profile and various Emergency Procedures.	No	Yes		X			B	B
In-Flight Maneuvers	Similar.								
21 Air Conditioning	Decreased Max Differential Pressure and changes to Bleed Air, Environmental Air, and Pressurization components.	No	No		X			B	B
22 Autoflight	1900D optional APS-65 Autopilot. 1900C optional SPZ-2000 or SPI-4000.	No	Yes		X			B	B
23 Communications	Different Collins Communications Radios and CVR.	No	No	X				A	A
24 Electrical Power	Single AC Buss System.	No	Yes		X			B	B
25 Equipment/Furnishings	Different Interior.	No	No	X				A	A
26 Fire Protection	Changes in Firewall and Aft Nacelle.	No	No	X				A	A
27 Flight Controls	No Rudder Boost option. four Flap Settings.	Yes	Yes		X			B	B
28 Fuel	1900 fuel system has bladder fuel cells, 1900C fuel system changes to wet wings, changes to fuel venting for wing tip difference.	No	No	X				A	A

SAMPLE DIFFERENCES TABLE					COMPLIANCE METHOD					
DIFFERENCE AIRCRAFT: BE-1900/1900C										
BASE AIRCRAFT: BE-1900D					TRAINING				CHKG/CURR	
DESIGN	REMARKS	FLT CHAR	PROC CHNG	LVL A	LVL B	LVL C	LVL D	CHK	CURR	
29 Hydraulic	Similar.									
30 Ice/Rain	Different Deice Boot coverage, Deice Annunciators, and Pitot Heat Annunciator System.	No	Yes		X			B	B	
31 Indicating/Recording	Different FDR standard and Annunciator Panel.	No	No	X				A	A	
32 Landing Gear	Gear Position Indicators (various).	No	No	X				A	A	
33 Lights	Different cockpit lighting.	No	Yes	X				A	A	
34 Navigation	Different Collins Navigation Radios and Mechanical Displays, No Standby Attitude Indicator.	Yes	Yes			FTD		B	B	
35 Oxygen	Crew Mask Container and Mask Mic.	No	Yes			FTD		B	B	
36 Pneumatics	Changes in Bleed Air Pressure and Vacuum readings.	No	Yes	X				A	A	
37 Vacuum	Vacuum Flight Instruments on Right Side.	No	Yes		X			B	B	
38 Waste/Water	N/A.									
45 Maintenance Computer	N/A.									
46 Information Systems	N/A.									
49 APU	N/A.									
52 Doors	Smaller Airstair, Cargo, and Emergency Exit Doors.	No	No	X				A	A	
53 Fuselage	Round Cabin Shape no standup height.	No	No	X				A	A	
54 Nacelles/Pylons	Changed Nacelle Firewall and Aft Nacelle.	No	No	X				A	A	
55 Horizontal and Vertical Stabilizer	Single Ventral Fins and smaller Taillets.	Yes	No	X				A	A	
56 Windows	Smaller cabin windows and cockpit sun visor.	No	No	X				A	A	
57 Wings	Smaller Wing Tips, no winglets.	No	No	X				A	A	

SAMPLE DIFFERENCES TABLE				COMPLIANCE METHOD					
DIFFERENCE AIRCRAFT: BE-1900/1900C									
BASE AIRCRAFT: BE-1900D				TRAINING				CHKG/CURR	
DESIGN	REMARKS	FLT CHAR	PROC CHNG	LVL A	LVL B	LVL C	LVL D	CHK	CURR
61 Propellers	Metal Propeller Blades.	No	No	X				A	A
71 Powerplant	Different engine truss and Autofeather annunciations.	No	Yes		X			B	B
72 Engine (Turbine)	PT6A-65B 1900/1900C.	No	Yes		X			B	B
73 Fuel Controls	No Duplex Fuel nozzles.	No	No		X			A	B
74 Engine Ignitions	Similar.								
75 Engine Bleed Air	Similar.								
76 Engine Controls	Similar.								
77 Engine Indicating	Similar.								
78 Exhaust	Smaller Exhaust Stacks.	No	No	X				A	A
79 Engine Oil	Similar.								
80 Engine Starting	Similar.								

Definitions Used in the Tables	
X	= Pilot's Operating Handbook and/or Flight Manual Supplement
AI	= Aided Instruction
CBT	= Computer-Based Training
ICBT	= Interactive Computer-Based Training
FTD	= Flight Training Device (Level 1 to 7)
FBS	= Fixed-Base Simulator (Level 5 to 7)
FFS	= Full Flight Simulator (Level A, B, C, D)

SAMPLE DIFFERENCES TABLE				COMPLIANCE METHOD					
DIFFERENCE AIRCRAFT: 1900D G950									
BASE AIRCRAFT: 1900D EFIS-84				TRAINING				CHKG/CURR	
DESIGN	REMARKS	FLT CHAR	PROC CHNG	LVL A	LVL B	LVL C	LVL D	CHK	CURR
General Airplane Configuration	Garmin G950 integrated flight deck PFD/MFD replaces existing EFIS 84 EADIs and EHSIs along with all analog flight and engine instruments. Systems indicators located in the lower panels are retained, including flaps and fuel quantity indicators.	NO	YES			FTD		B	C
Weights	Revised W&B/Equipment List.	NO	NO	X				A	A
Limitations	Limitations related to the avionics/Flt Inst. KOEL change to G950 system. Limits for Class A TAWS, TCAS-1, GPS WAAS, RNP-4, and LPV.	NO	YES		AI			B	B
Placards and Markings	New Placard Formats replace existing placards.	NO	NO	X				A	A
Servicing	No Change.								
Engines	No Change.								
Flight Deck	Replace EFIS-84, Mechanical Flt/Eng Inst., FDC-65, Alt Alerter and Proline 2 Radios with G950 System. XM WX Data (optional). GSR-56 Iridium Satcom (optional). Excludes FCS-65 Autopilot interface.	NO	YES			FTD		C	C
Cabin	No Change.								
Flight Controls	No Change.								
Aerodynamic Controls	No Change.								

SAMPLE DIFFERENCES TABLE				COMPLIANCE METHOD					
DIFFERENCE AIRCRAFT: 1900D G950									
BASE AIRCRAFT: 1900D EFIS-84				TRAINING				CHKG/CURR	
DESIGN	REMARKS	FLT CHAR	PROC CHNG	LVL A	LVL B	LVL C	LVL D	CHK	CURR
Instrument Panel Layout	<p>G950 PFD/MFD format replaces all Primary Flight Inst. and Engine Inst. G950 PFD includes SVS. GDU reversion controlled by GMA-1347 Display Backup button. Lower Inst. Panel switches unchanged.</p> <p>Change from dual Collins EFIS 84, Mechanical Flt/Eng indicators, Collins FDC-65 Flight Director, Collins Proline 2 radios to Garmin G950 Integrated flight deck system.</p> <ul style="list-style-type: none"> • Changed from EADI/EHSI EFIS 84 and Mechanical Primary Flight Inst. to dual PFD (GDU-1040). • RMI Removed, Bearing on PFD. • Engine Instruments now displayed on MFD (GDU-1500). • Replaced mechanical Standby Attitude Indicator with 3 in one standby display (MD302). • Prop synch moved to MFD. • FDC-65 Flight Director Controllers replaced with GMC-710 FDC top center instrument panel. • MFD controller (GCU-477) on left forward center pedestal. • Proline 2 audio replaced by 2 (GMA-1347) audio panels outboard of PFDs. • Yaw Damper self-test relocated to center pedestal switch with annunciation on PFD. • GWX-70 Weather Radar displayed on MFD. • AFX displayed in engine instrument grouping of the MFD. • Altitude Alerter moved to G950 PFD and FD using GMC-710. • System adds synthetic vision and HITS displays (optional). • Garmin GPS400 replaced by G950 system WAAS GPS. • Garmin GDU-1500 integrated TAWS Class A installed exclusively. 	NO	YES			FTD		C	C
Preflight	G950 Cockpit Preflight Procedures	NO	YES		AI			B	B

SAMPLE DIFFERENCES TABLE				COMPLIANCE METHOD					
DIFFERENCE AIRCRAFT: 1900D G950									
BASE AIRCRAFT: 1900D EFIS-84				TRAINING				CHKG/CURR	
DESIGN	REMARKS	FLT CHAR	PROC CHNG	LVL A	LVL B	LVL C	LVL D	CHK	CURR
Before Start	Electrical Power Procedures, Busing, Standby Power, and Displays. Delete EFIS-84 checks.	NO	YES		AI			B	B
Engine Start	Electronic Engine Gauges on MFD.	NO	YES			FTD		B	C
After Start and Taxi	G950 System Checks.	NO	YES			FTD		B	B
Takeoff	G950 PFD/MFD setup, V-speeds. PFD/MFD Inst reference for Takeoff.	NO	YES			FTD		B	C
RTO or V ₁ Fail	PFD airspeed and attitude reference. MFD Engine indications.	NO	NO			FTD		B	C
Climb Cruise Descent	Flight Director Use, LSA. Altitude Alerter Use. Navigation, Navigation Source, FD.	NO	YES			FTD		B	C
In-Flight Maneuvers	Maneuvers affected by PFD Flight Inst. (Steep Turns, Stall LSA, FD, Navigation).	NO	NO				FFS	D	C
Instrument Approaches	Flight Plan selection procedures. Approach selection, activation, FD use. LNAV/VNAV and LPV approach procedures.	NO	YES				FFS	D	C
Landing	PFD Inst. reference and setting V-speeds. MFD Engine Inst. reference.	NO	YES			FTD		B	B
Shutdown	G950 Display shutdown procedures.	NO	YES			FTD		B	B
Normal Procedures	AFMS Procedures for G950 Display System, TCAS, TAWS.	NO	YES				FFS	D	C
Abnormal Procedures	AFMS Procedures for G950 Display System, TCAS, TAWS.	NO	YES			FTD		B	B
Emergency Procedures	AFMS Procedures for G950 Display System, TCAS, TAWS.	NO	YES			FTD		C	C
21 Air Conditioning	No Change.								
22 Autoflight	FYD-65 Yaw Damper retained with YD Test moved to center console button. ICU Converter added to interface with existing FYD-65. FCS-65 not approved with this STC. CWS button on yoke. FCP-65 FD Controller replace with 1 GCU-710 top center instrument panel.	NO	YES		AI			B	B

SAMPLE DIFFERENCES TABLE				COMPLIANCE METHOD					
DIFFERENCE AIRCRAFT: 1900D G950									
BASE AIRCRAFT: 1900D EFIS-84				TRAINING				CHKG/CURR	
DESIGN	REMARKS	FLT CHAR	PROC CHNG	LVL A	LVL B	LVL C	LVL D	CHK	CURR
23 Communications	G950 Dual VHF (GIA-63W) replace Proline 2 radios, tuned with DCP on GDU-1040s. Abnormal Tuning Procedures added. GMA-1327 audio panels replace Proline 2 audio panels. Cohbam Model 240 provides PA system for GMA-1347 Audio Panels and cabin briefer.	NO	YES			FTD		B	C
24 Electrical Power	115VAC/400HZ remains but no G950 use. Changes to CB Panel. AHRS/ADC/PFD/MFD/GEA power sources. Each PFD has own PS-835 Standby Battery and Standby Battery Switch. RH AC Bus Transfer removed.	NO	NO	X				A	B
27 Flight Controls	Interface Control added for YD/RB function convert digital to analog signal.	NO	NO	X				A	B
31 Indicating/ Recording	AFX Green Ann. on MFD b/w ITT and Torq Prop Synchphaser indicator on MFD. YD Ann. on PFD. PFD/MFD cooling fan functions added. G950 interfaces with L3 FDR and CVR. New Annunciator Switches for Prop Sync and Emergency Frequency along with Dimming Selection.	NO	NO		AI			B	B
33 Lights	G950 Internal Display lighting. Existing Cockpit Lighting control function.	NO	NO		AI			B	B
34 Navigation	PFD Display Format replace Basic T. Dual G950 VHF Navs. Single ADF, DME, and RAD ALT on G950.	NO	YES				FFS	D	C
34 Navigation	Navigation Display and Flight Plan. Dual GPS WAAS with GIA-63A, w/ RNP-4. LNAV/VNAV and LPV Approaches.	NO	YES				FFS	D	C
34 Navigation	G950 integrated ADC (GDC-7400) with Pitot/Static interface changes. Baro-set and Alt. Alerter. LSA on speed tape. Tape Altimeter and VS. G950 integrated ADHRS (GRC-77).	NO	YES			FTD		C	C
34 Navigation	GTX-33 Transponder controlled by PFD DCP or GDU-477. Collins DME-42 retained w/ G950 display. Collins ADF-462 retained w/ bearing on PFDs. RAC-870 Converter installed to retain Collins ALT-55 RAD ALT on PFD. WX RDR (GWX-70). TCAS (GTS-855). TAWS Class A integrated in G950 PFD/MFD.	NO	YES		AI			B	B

SAMPLE DIFFERENCES TABLE				COMPLIANCE METHOD					
DIFFERENCE AIRCRAFT: 1900D G950									
BASE AIRCRAFT: 1900D EFIS-84				TRAINING				CHKG/CURR	
DESIGN	REMARKS	FLT CHAR	PROC CHNG	LVL A	LVL B	LVL C	LVL D	CHK	CURR
46 Information Systems	G950 EFB Functions. IAP only, no Enroute Charts. Emergency Power Chart availability. XM WX Data (GDL-69A).	NO	YES			FTD ICBT		B	C
53 Fuselage	Add GPS WAAS antennas, XM Antenna, and 2 OAT Probes.	NO	NO	X				A	B
61 Propellers	Propeller Synchrophase Indication on MFD. Propeller Synchrophase Switch now PB. AFX Green Ann. on MFD.	NO	NO	X				A	B
77 Engine Indicating	The engine instruments were independent analog instruments and are now indications included in the Garmin G950 using 2 GEA-71 engine/airframe data concentrators with Signal Conditioners. Eng. Inst. Primary display is in the MFD with reversionary displays in the PFDs. Engine displays include: <ul style="list-style-type: none"> • Prop RPM X 2. • Torque X 2. • Turbine speed X 2. • Turbine Temperature X 2. • Fuel Flow X 2. • Engine oil pressure X 2. • Engine oil Temperature X 2. The engine displays include alerting for operation outside normal ranges. AFX indication above each torque Indicator. Prop Sync indication is between RPM ind. Engine indication for ITT rescales for starting and once the engine is started, displays normal scaling.	NO	YES			FTD		B	C
80 Engine Starting	Engine starting is unchanged except where impacted by Engine Indicating and Electrical Power distribution procedures.								

Differences Requirements

Definitions Used in the Tables	
X	= Pilot's Operating Handbook and/or Flight Manual Supplement
AI	= Aided Instruction
CBT	= Computer-Based Training
CPT	= Cockpit Procedures Trainer
ICBT	= Interactive Computer-Based Training
FTD	= Flight Training Device (Level 1 to 7)
FFS	= Full Flight Simulator (Level A, B, C, D)

SAMPLE DIFFERENCES REQUIREMENTS TABLE				COMPLIANCE METHOD					
DIFFERENCE AIRCRAFT: 1900D with IDS-3000									
BASE AIRCRAFT: 1900D with Proline 2 (EFIS-84)				TRAINING				CHKG/CURR	
DESIGN	REMARKS	FLT CHAR	PROC CHNG	LVL A	LVL B	LVL C	LVL D	CHK	CURR
General Airplane Configuration	No Change.								
Weights	Change in BOW and equipment list.	NO	NO	X				A	B
Airworthiness Limitations	Limitations for IDS-3000. Engine Display Markings.	NO	NO	X				B	B
Placards and Markings	No Change.								
Servicing	No Change.								
Engines	No Change.								
Flight Deck	Center Pedestal extended aft to accommodate relocation of radio controls, CHP, Mode Select Panel, and MFD control.	NO	YES		AI			A	B

SAMPLE DIFFERENCES REQUIREMENTS TABLE				COMPLIANCE METHOD					
DIFFERENCE AIRCRAFT: 1900D with IDS-3000									
BASE AIRCRAFT: 1900D with Proline 2 (EFIS-84)				TRAINING				CHKG/CURR	
DESIGN	REMARKS	FLT CHAR	PROC CHNG	LVL A	LVL B	LVL C	LVL D	CHK	CURR
Instrument Panel Layout	Install IDS-3000 PFD1, PFD2, and MFD. Removal EFIS-84 flight instruments. Remove analog engine indications. Relocated following from Instrument Panel to Center Pedestal: (1) #1 and #2 FCP-65 Control Panel. (2) (2)#1 and #2 VHF NAV/Com Transceiver Control Head. (3) #1 and #2 ADF Control Head. (4) Transponder Control Head. (5) TCAS Control Head. Add Audio Panel with Compass Control and PFD dimming. Add Reversionary Panel with MFD dimming, Gnd Comm Pwr, AP select, TCAS, DME Vol., intercom, Rad Alt., Xpdr, and Prop Sync. Add 2 Display Control Panels with Integrated Altitude Alerter.	NO	MINOR		AI	FTD ICBT		B	B
Flight Controls	No Change.								
Preflight	PFD/MFD power distribution.	NO	YES			FTD		B	B
Engine Start	Use of MFD Engine Display and PFD/MFD power distribution.	NO	YES			FTD		B	B
Taxi	Flight Instrument checks.	NO	YES			FTD		B	C
Takeoff	V-speed and Altitude Selection. Airspeed Indication on tape format.	NO	YES			FTD		B	C
RTO or V ₁ Fail	Airspeed Indication on tape format. Attitude indications on PFD format. Low Speed Awareness cues.	NO	YES			FTD		B	C
Climb Cruise Descent	PFD format for all flight instruments. Low Speed Awareness cues. Selection and use of Navigation Sources.	NO	YES			FTD		B	C
Instrument Approaches	Navigation Source Selection and display format. LNAV, LNAV/VNAV, and LPV approaches.	NO	YES				FFS	D	C
Landing	V-speed and Altitude Selection. Airspeed Indication on tape format.	NO	YES			FTD		B	C

SAMPLE DIFFERENCES REQUIREMENTS TABLE				COMPLIANCE METHOD					
DIFFERENCE AIRCRAFT: 1900D with IDS-3000									
BASE AIRCRAFT: 1900D with Proline 2 (EFIS-84)				TRAINING				CHKG/CURR	
DESIGN	REMARKS	FLT CHAR	PROC CHNG	LVL A	LVL B	LVL C	LVL D	CHK	CURR
Normal Procedures	Navigation Source selection, Navigation Display format, Autopilot and FD control. IFIS-5000 use procedures. TCAS and TAWS use procedures.	NO	YES				FFS	C	C
Abnormal Procedures	Abnormal procedures for Avionics/Flight Instruments of IDS-3000 system.	NO	YES			FTD		B	B
Emergency Procedures	Emergency procedures for Dual Generator Failure, AC Inverter Failures, Emergency Power Management, and Standby Flight Instruments.	NO	YES			FTD		C	C
In-Flight Maneuvers	Tape format and Low Speed Awareness for Steep Turns and Stalls.	NO	YES				FFS	D	C
21 Air Conditioning	No Change.								
22 Autoflight	Original Collins APS-65 Autopilot is retained adding dual AHRS monitoring. Autopilot Mode Annunciation and Disconnect Annunciation now on PFD. AP/FD Flight Control Panel and Remote Mode Annunciator Panel moved from above EADI to forward Center Pedestal. AP/FD couple arrow not functional for AP. AP selector on Reversionary Panel. Dual FD installation. YD annunciation.	NO	YES		AI			B	B
23 Communications	VHF Com, VHF Navigation, ADF, XPDR, and TCAS Control Heads relocated to pedestal.	NO	NO	X				A	A

SAMPLE DIFFERENCES REQUIREMENTS TABLE				COMPLIANCE METHOD					
DIFFERENCE AIRCRAFT: 1900D with IDS-3000									
BASE AIRCRAFT: 1900D with Proline 2 (EFIS-84)				TRAINING				CHKG/CURR	
DESIGN	REMARKS	FLT CHAR	PROC CHNG	LVL A	LVL B	LVL C	LVL D	CHK	CURR
24 Electrical Power	Add Emergency Power sources control panel on top center instrument panel. Add PS-835 Emergency Power Supplies for emergency power of PFD1 and MFD. Normal PFD1 and MFD power #2 avionics buss, Normal PFD 2 power Rht. Gen Buss. Standby Horizon Power and lighting remains. Circuit Breaker Panel changes and additions. 115 V AC no longer utilized by aircraft. 26 V AC remains for FD, AP, Radar Stab.	NO	YES		AI			B	B
25 Equipment/ Furnishings	No Change.								
26 Fire Protection	Engine Fire Indication added to Engine Display inside TRQ/ITT indicator..	NO	NO	X				A	A
27 Flight Controls	No Change.								
28 Fuel	No Change.								
29 Hydraulic	No Change.								
30 Ice/Rain	Low Speed Awareness for Icing conditions requires use of REFS V _t selected to 160 kts. No Low Speed Awareness automated adjustment for icing conditions included.	NO	YES		AI			B	B

SAMPLE DIFFERENCES REQUIREMENTS TABLE				COMPLIANCE METHOD					
DIFFERENCE AIRCRAFT: 1900D with IDS-3000									
BASE AIRCRAFT: 1900D with Proline 2 (EFIS-84)				TRAINING				CHKG/CURR	
DESIGN	REMARKS	FLT CHAR	PROC CHNG	LVL A	LVL B	LVL C	LVL D	CHK	CURR
31 Indicating/ Recording	<p>No Changes to main Annunciator Panels.</p> <p>Remote Annunciators changed, removed or relocated:</p> <ul style="list-style-type: none"> • AFX green remote annunciation is now on MFD Engine Display inside TRQ/ITT. • Autopilot Disconnect and Mode annunciation is now on PFD. • GPWS/EGPWS annunciators relocated above PFD1 and PFD2 on Remote Ann. Panel. • TCAS annunciation now on PFD/MFD. • FDR status annunciation moved to remote annunciator panel above PFD1. • FD/AP/YD mode Remote Annunciator Panel moved to center pedestal with FCP-65 relocation. Flight Control Annunciations are duplicated on PFD1 and PFD2. • Reversion annunciation is on PFD. 	NO	YES		AI			B	B
32 Landing Gear	Protrusion of Parking Brake Knob through the Center Pedestal Cover creates potential for inadvertent release of Parking Brake.	NO	NO		AI			B	B
33 Lights	Cockpit lighting control changes to multiple dimming controls. PFD dimming on Audio Panel, MFD dimming on Reversion Panel. Minor changes in EL Panel format and labels.	NO	YES	X				B	B

SAMPLE DIFFERENCES REQUIREMENTS TABLE				COMPLIANCE METHOD					
DIFFERENCE AIRCRAFT: 1900D with IDS-3000									
BASE AIRCRAFT: 1900D with Proline 2 (EFIS-84)				TRAINING				CHKG/CURR	
DESIGN	REMARKS	FLT CHAR	PROC CHNG	LVL A	LVL B	LVL C	LVL D	CHK	CURR
34 Flight Instruments	EADI/EHSI CRT EFIS displays replaced by 8x10" LCD PFD EFIS displays. Separate EADI and EHSI replaced with composite PFD format. NORM or FREE Heading slave mode control relocated to Audio Panel. Analog Flight Instruments replaced with composite PFD format. Separate mechanical pneumatic Airspeed, Altimeter and Vertical Speed replaced with composite PFD format. RMI removed, bearing selections displayed on composite PFD format. New EFIS format/control/selections <ul style="list-style-type: none"> • 2 Display Control Panels (DCP) for PFD. • 1 Course Heading Panel (CHP). • 2 Digital Interface Units (DIU). • 1 Cursor Control Panels (CCP) for MFD. 	NO	YES			FTD		C	C
34 Flight Instruments	Add Dual Garmin GPS400W required. (GPS1 and GPS2) Navigation Display available on lower composite PFD format and on MFD. Add LNAV, LNAV/VNAV, and LPV Approach capability. No Baro-VNAV.	NO	YES			FTD		C	C
34 Flight Instruments	Install Dual ADC-85 Air Data Computers. Add Low Speed Awareness to speed tape. Altitude Baro Set is provided on DCP. Altitude Alerter/Pre-selector Controller is provided on DCP.	NO	YES			FTD		A	B
34 Flight Instruments	Collins TCAS-4000 (TCAS II) display is selectable to PFD and MFD. WX Radar only selectable to MFD. Honeywell Mk 6 TAWS (TAWS B only) Class B only because no Terrain Display.	NO	YES			FTD		A	B
35 Oxygen	No Change.								
36 Pneumatics	No Change.								
37 Vacuum	No Change.								

SAMPLE DIFFERENCES REQUIREMENTS TABLE				COMPLIANCE METHOD					
DIFFERENCE AIRCRAFT: 1900D with IDS-3000									
BASE AIRCRAFT: 1900D with Proline 2 (EFIS-84)				TRAINING				CHKG/CURR	
DESIGN	REMARKS	FLT CHAR	PROC CHNG	LVL A	LVL B	LVL C	LVL D	CHK	CURR
38 Waste/Water	No Change.								
45 Maintenance Computer	No Change.								
46 Information Systems	IFIS-5000 installed for Electronic Charts and/or Graphical Weather. IFIS-5000 is not linked to Flight Plan. Chart selection is workload intensive using rotary knob on CCP. Own-Ship-Position is available on IFIS-5000 provided graphics.	NO	YES			FTD ICBT		B	C
49 APU	N/A.								
52 Doors	No Change.								
53 Fuselage	Add 2 exterior antennas for GPS/XM.	NO	NO	X				A	B
54 Nacelles/Pylons	No Change.								
55 Horizontal and Vertical Stabilizer	No Change.								
56 Windows	No Change.								
57 Wings	No Change.								
61 Propellers	Propeller Synchronization switch is relocated to Reversionary Panel. Propeller Syncrophaser is indicated on Engine Display. AFX green annunciation added to Engine Display replacing remote annunciators.	NO	NO	X				A	B
72 Engine (Turbine)	No Change.								
73 Fuel Controls	No Change.								
74 Engine Ignitions	No Change.								
75 Engine Bleed Air	No Change.								
76 Engine Controls	No Change.								

SAMPLE DIFFERENCES REQUIREMENTS TABLE				COMPLIANCE METHOD					
DIFFERENCE AIRCRAFT: 1900D with IDS-3000									
BASE AIRCRAFT: 1900D with Proline 2 (EFIS-84)				TRAINING				CHKG/CURR	
DESIGN	REMARKS	FLT CHAR	PROC CHNG	LVL A	LVL B	LVL C	LVL D	CHK	CURR
77 Engine Indicating	Separate Analog Engine Instruments replaced Engine Display. (Normal on MFD, Reversion on PFD). Exceedances are annunciated in Red. Abnormal indications are annunciated in Amber. Primary for power Torque and ITT combined round dial gauge and digital display, Propeller RPM is round dial gauge and digital display: N1 is round dial gauge and digital display. Fuel Flow, Oil Pressure and Oil Temp are digital only. AC powered Torque Indicators are replaced with self-generating torque sending units. Placement and function of DCUs and EDUs (2 each).	NO	YES			FTD		B	C
80 Engine Starting	Engine Instruments on EIS of MFD.	NO	NO		AI			B	B

APPENDIX 3

SAMPLE OF AN ACCEPTABLE TRAINING PROGRAM FOOTPRINT

(Reserved)

APPENDIX 4

AIRCRAFT COMPLIANCE CHECKLIST

Appendix 4 – BE-1900 OPERATING RULES COMPLIANCE CHECKLIST

Any U.S. operator wishing to operate the BE-1900 aircraft will have to demonstrate to the FAA that the aircraft fully complies with all applicable 14 CFR parts prior to that aircraft entering service. This checklist may be used by the operator to show compliance with those items listed in it.

14 CFR 121 COMMUTER AIRCRAFT OPERATING RULES COMPLIANCE CHECKLIST

Following Regulations Applicable to Delayed Part 121 Compliance Items for 1900D (14 CFR 121.2)
(These requirements are in addition to Part 23 Commuter Category Certification Basis)

14 CFR Section	Comply Date	Requirement	Compliance	Remarks	FSB Finding
These Determinations are made based on 1900D Type Design according to the TCDS and does not include evaluation of post manufacture modifications and/or STCs. (1900D is Serial Number UE-01 thru UE-439).					
121.312(c)	20 DEC 2010	All Interior Materials must meet the compartment interior requirements set forth in 25.853. Only Seat Cushion compliance is delayed.	All original Type Design material within the occupied portion of the fuselage are constructed of materials that meet the requirements of § 25.853.	Any STC installation must comply.	Complies
121.308	22 DEC 1997	Non-transport category airplane lavatory must be equipped with a smoke detector system.	Modify Airplane equipped with the factory installed optional lavatory per Kit # 129-5031 and Kit # 129-5033.	Must be equipped.	Complies
121.310(g)	20 MAR 1997	Passenger Emergency Exit must be marked on outside of airplane.	Install Kit – Exterior Marking Instl – Model 1900D, Kit # 129-0011.	Must be equipped.	Complies
121.310(b)(1)	12 MAR 1999	Interior Emergency Exit conspicuously marked.	Install Kit – Emergency Exit Light, Kit # 129-5313.	Must be equipped.	Complies
121.342	20 DEC 1999	Non-transport category airplane equipped with a flight instrument pitot heating system must also be equipped with an operable pitot heat indication system that complies with § 25.1326.	1900D original manufacture Type Design complies.		Complies
121.289	20 DEC 1997	Have Landing Gear Aural Warning Device that functions continuously whenever the wing flaps are extended beyond the maximum certificated approach climb configuration position and landing gear is not fully extended.	1900D original manufacture Type Design complies.		Complies
121.293	20 DEC 1999 Manf.	Manufacture after 20 DEC 1999 must contain Takeoff Warning System that meets requirements of § 25.703 unless it has been demonstrated that takeoff with device in the most adverse position would not create a hazardous condition.	1900D S/N UE-1 through UE-384, and UE-386 through UE-389 are manufactured 20 DEC 1999 or before, therefore 14 CFR § 121.293 is not applicable to these aircraft. UE-385 and UE-390 and after are manufactured after 20 DEC 1999 and must provide a Takeoff Warning System or demonstrate no hazardous condition for each combination of most adverse position.	Compliance for UE-385 and UE-390 and after determined per Federal Register Preamble 12/20/1995, Final Rule, Commuter Operations and General Certification and Operating Requirements (60 FR 65859).	Complies by service history per Preamble.
121.310(e)(2)	20 DEC 1997	Emergency Handle Exit Illumination must maintain 100 micro lamberts luminescence.	1900D original manufacture Type Design complies.		Complies

14 CFR Section	Comply Date	Requirement	Compliance	Remarks	FSB Finding
121.803	20 MAR 1997	Have required number of approved First Aid Kits listed in Appendix A to Part 121 (at least one FAK).	Install 129-5300 First Aid Kit.	Must be equipped.	Operator Responsibility
121.341(b)	20 MAR 1997	Must have means for illuminating or otherwise determining the formation of ice on the parts of the wings that are critical from the standpoint of ice accumulation to operate in icing conditions at night.	1900D original manufacture Type Design complies.		Complies
121.317	20 DEC 1997 Manf.	Passenger information signs that meet requirements of § 25.791, § 25.1541 except as provided in § 121.317(l) (allow placards instead of lighted sign).	Original manufacture Type Design includes lighted and crew operable Smoking and Seatbelt signs. UE-1 through UE-299 and UE-302 are allowed § 121.317(l) placard exception by manufacture date before 20 DEC 1997.	UE-300, UE-301, and UE-303 and after must comply.	Operator Responsibility
121.305(j)	20 MAR 1997 Manf.	A third gyroscopic band and pitch indicator is installed on the instrument panel plainly visible to and usable by each pilot station.	1900D original manufacture Type Design complies.	UE 1 thru UE-273 are before 3/20/1997; UE-274 and after are 3/20/97 or after.	Complies
121.357	20 MAR 1997	Approved airborne weather radar equipment installed in the airplane.	1900D original manufacture Type Design complies.		Complies
121.337(b)(8)	20 DEC 1997	PBE located on the flight deck and immediately accessible for use.	Install Kit # 129-5032-1/-3/-5/-7 – Crew Protective Breathing Provisions Kit	Must be equipped.	Complies
121.311(f)	20 MAR 1997 Manf.	Each flight deck station equipped with a combined safety belt and shoulder harness meets § 25.785	1900D original manufacture Type Design complies.	UE 1 thru UE-273 are before 3/20/1997; UE-274 and after are 3/20/97 or after.	Complies
121.578	20 MAR 1997	Cabin Ozone Concentration	Not applicable to 1900D by Maximum operating altitude.		NA
121.576 and 577	20 MAR 1997	Galley equipment retention/stowage and means to prevent each item of crew baggage in the passenger or crew compartment from becoming a hazard by shifting under load conditions.	No Galley Equipment installed at manufacture. Any STC Galley installation must comply. Crew baggage should be carried in the baggage compartments.	Crew baggage retention provided in forward baggage area (coat closet).	NA/Complies
121.161(b)	20 DEC 2010	For any extended overwater operation (50 nm from shoreline) the airplane must be approved per Part 25 ditching provisions.	1900D original manufacture Type Design does not comply with Part 25 ditching provisions.		Does not comply for Extended Overwater Operation

14 CFR Section	Comply Date	Requirement	Compliance	Remarks	FSB Finding
121.340	20 DEC 1997	Approved Flotation Device for each occupant is required for any overwater operation.	1900D original manufacture Type Design Seat Cushion is approved flotation means and provisions to stow Life Vests under seat.	Operator responsibility if Life Vests are used.	Complies
121.313(f) and (g)	20 MAR 1997	Door Key and Locking Door not applicable to non-transport category airplanes.	1900D is excluded by non-transport category.		NA
121.333 (d)	28 NOV 2005	Portable Oxygen equipment for cabin attendants.	Not applicable to 1900D by Maximum operating altitude.		NA
121.333(e)(3)	20 MAR 1997	First Aid Oxygen.	Not applicable to 1900D by Maximum operating altitude.		NA
121.339	20 MAR 1997	Extended Overwater Operations equipment requirements and provisions for stowage.	1900D original manufacture Type Design does not comply with provisions to stow required Extended Over-Water Equipment per § 121.339(b).	Aircraft does not comply § 121.161(b) so not necessary 20 DEC 2010.	Does not comply for Extended Overwater Operation.
121.99	20 MAR 1997	Enroute Radio Communications Facilities, Domestic and Flag.	Enroute Radio Communication Facilities are exclusively an operator responsibility.	Aircraft equipment available.	Operator Responsibility
121.309(d)(2)	20 MAR 1997	Latex Gloves.	§ 121.309(d) not applicable by deletion Amendment 121-281, 05/12/2004		NA
121.571(b)	20 MAR 1997	Passenger Information Cards.	Passenger Information Cards are exclusively an operator responsibility.		Operator Responsibility
121.549(b)	20 MAR 1997	Flashlights readily available for use.	Install Kit - Flashlight Holder Installation Kit # 129-5312.	Must be equipped.	Complies
121.310(n)	20 MAR 1997	Flashlight stowage provisions at each flight attendant seat.	No Flight Attendant Seat installed at manufacture. Any STC installation must comply.		NA
121.349(d)	20 MAR 1997	Equipped with at least one approved DME or suitable RNAV system.	1900D original manufacture Type Design complies.	Aircraft equipment available.	Complies
121.617	20 MAR 1997	AFM information to determine the Single engine cruise performance.	Single engine cruise performance is in the FAA Approved POH/AFM.		Complies
121.157(e)	20 MAR 1997	Type certificated in the Commuter Category and meets performance requirements of Part § 121.189 through § 121.197.	Performance data is available in the FAA Approved POH/AFM.		Complies
121.173(b)	20 MAR 1997	Type certificated in the Commuter Category must comply with requirements of Part § 121.189 through § 121.197.	Performance data is available in the FAA Approved POH/AFM.		Operator Responsibility
121.189(c)	20 MAR 1997	Airplane takeoff performance must comply Accelerate/Stop distance, Takeoff Distance, and Takeoff Run.	Performance data is available in the FAA Approved POH/AFM.		Complies

14 CFR 121 COMMUTER AIRCRAFT OPERATING RULES COMPLIANCE CHECKLIST

Following Regulations Applicable to Delayed Part 121 Compliance Items for 1900C: (14 CFR 121.2)
(These requirements are in addition to Part 23 Normal Category and SFAR 41 Certification Basis)

14 CFR Section	Comply Date	Requirement	Compliance	Remarks	FSB Finding
These Determinations are made based on 1900C Type Design according to the TCDS and does not include evaluation of post manufacture modifications and/or STCs. (1900C is Serial Numbers UB-01 to UB-74 and UC-01 to UC-174).					
121.312(c)	20 DEC 2010	All Interior Materials must meet the compartment interior requirements set forth in § 25.853. Only Seat cushion compliance is delayed.	All original Type Design material within the occupied portion of the fuselage are constructed of materials that meet the requirements of § 25.853.	Any STC installation must comply.	Complies
121.308	20 DEC 1997	Non-transport category airplane lavatory must be equipped with a smoke detector system.	No Lavatory installed. Any STC installation must comply.		N/A
121.310(g)	20 MAR 1997	Passenger Emergency Exit must be marked on outside of airplane.	Install Kit – Exterior Marking Instl – Model 1900C, Kit # 118-0000.	Must be equipped.	Complies
121.310(b)(1)	12 MAR 1999	Interior Emergency Exit conspicuously marked.	Install Kit – Emergency Exit Light, Kit # 114-5312.	Must be equipped.	Complies
121.342	20 DEC 1999	Non-transport category airplane equipped with a flight instrument pitot heating system must also be equipped with an operable pitot heat indication system that complies with § 25.1326.	Install Kit – Pitot Heat Indicator Kit # 114-3044-1.	Must be equipped.	Complies
121.289	20 DEC 1997	Have Landing Gear Aural Warning Device that functions continuously whenever the wing flaps are extended beyond the maximum certificated approach climb configuration position and landing gear is not fully extended.	1900C original Manufacture Type Design complies.		Complies
121.293	20 DEC 1999 Manf.	Manufacture after 20 DEC 1999 must contain Takeoff Warning System that meets requirements of § 25.703 unless it has been demonstrated that takeoff with device in the most adverse position would not create a hazardous condition.	By 20 DEC 1999 Manufacture Date, All Model 1900Cs are excluded.	1900C manufacture ended in 1991.	N/A
121.310(e)(2)	20 DEC 1997	Emergency Handle Exit Illumination must maintain 100 micro lamberts luminescence.	1900C original Manufacture Type Design complies.		Complies
121.803	20 MAR 1997	Have required number of approved First Aid Kits listed in Appendix A to Part 121 (at least one FAK).	Install 114-5300 First Aid Kit.	Must be equipped.	Operator Responsibility
121.341(b)	20 MAR 1997	Must have means for illuminating or otherwise determining the formation of ice on the parts of the wings that are critical from the standpoint of ice accumulation to operate in icing conditions at night.	1900C original Manufacture Type Design complies.	Wing Ice Lights installed.	Complies

14 CFR Section	Comply Date	Requirement	Compliance	Remarks	FSB Finding
121.317	20 MAR 1997	Passenger information signs that meet requirements of § 25.791, § 25.1541 except as provided in § 121.317(l) (allow placards instead of lighted sign).	By 20 DEC 1997 Manufacture Date, All Model 1900Cs are excluded from having § 25.791 compliant Fasten Seat Belt Light. Operator must comply with § 121.317(l) placards legible to each passenger seated.	1900C manufacture ended in 1991.	Operator Responsibility
121.305(j)	20 DEC 2010	A third gyroscopic bank and pitch indicator is installed on the instrument panel plainly visible to and usable by each pilot station.	Kit #118-3004 installs a J.E.T. AI-804AF Standby Gyro w/ a PS-835C Battery Pack.	Must be equipped.	Complies
121.357	20 MAR 1997	Approved airborne weather radar equipment installed in the airplane.	1900C original Manufacture Type Design complies.		Complies
121.337(b)(8)	20 DEC 1997	PBE located on the flight deck and immediately accessible for use.	Install Kit – Crew Protective Breathing Provisions Kit # 118-5000-1/-3.	Must be equipped.	Complies
121.311(f)	20 MAR 1997 Manf.	Each flight deck station equipped with a combined safety belt and shoulder harness meets § 25.785.	By 20 MAR 1997 Manufacture Date, All Model 1900Cs are excluded.	1900C manufacture ended in 1991.	N/A
121.578	20 MAR 1997	Cabin Ozone Concentration.	Not applicable to 1900C by Maximum operating altitude.		N/A
121.576 and 577	20 MAR 1997	Galley equipment retention/stowage and means to prevent each item of crew baggage in the passenger or crew compartment from becoming a hazard by shifting under load conditions.	No Galley Equipment installed. Any STC installation must comply.		N/A
121.161(b)	20 DEC 2010	For any extended overwater operation (50 nm from shoreline) the airplane must be approved per Part 25 ditching provisions.	1900C original Manufacture Type Design does not comply with Part 25 ditching provisions.		Does not comply for Extended Overwater Operation
121.340	20 DEC 1997	Approved Flotation Device for each occupant is required for any overwater operation.	1900C original Manufacture Type Design Seat Cushion is approved flotation means and provisions to stow Life Vests under seat.	Operator responsibility if Life Vests are used.	Complies
121.313(f) and (g)	20 MAR 1997	Door Key and Locking Door not applicable to non-transport category airplanes.	1900C is excluded by non-transport category.		N/A
121.333 (d)	28 NOV 2005	Portable Oxygen equipment for cabin attendants.	Not applicable to 1900C by Maximum operating altitude.		N/A
121.333(e)(3)	20 MAR 1997	First Aid Oxygen.	Not applicable to 1900C by Maximum operating altitude.		N/A
121.339	20 MAR 1997	Extended Overwater Operations equipment requirements and provisions for stowage.	1900C original Manufacture Type Design does not comply with provisions to stow required Extended Over-Water Equipment per § 121.339(b).	Aircraft does not comply § 121.161(b), so not necessary 20 DEC 2010.	Does not comply for Extended Overwater Operation
121.99	20 MAR 1997	Enroute Radio Communications Facilities, Domestic and Flag.	Enroute Radio Communication Facilities are exclusively an operator responsibility for area of operation.	Aircraft equipment available.	Operator Responsibility

14 CFR Section	Comply Date	Requirement	Compliance	Remarks	FSB Finding
121.309(d)(2)	20 MAR 1997	Latex Gloves.	§ 121.309(d) not applicable by deletion Amendment 121-281, 05/12/2004.		N/A
121.571(b)	20 MAR 1997	Passenger Information Cards.	Passenger Information Cards are exclusively an operator responsibility.		Operator Responsibility
121.549(b)	20 MAR 1997	Flashlights readily available for use.	Install Kit - Flashlight Holder Installation Kit # 114-5311.	Must be equipped.	Complies
121.310(n)	20 MAR 1997	Flashlight stowage provisions at each flight attendant seat.	No Flight Attendant Seat installed. Any STC installation must comply.		N/A
121.349(d)	20 MAR 1997	Equipped with at least one approved DME or suitable RNAV system.	1900C original Manufacture Type Design complies.	Aircraft equipment available.	Complies
121.617	20 MAR 1997	AFM information to determine the Single engine cruise performance.	Single engine cruise performance is in the FAA Approved POH/AFM and the ICAO POH/AFM.		Complies
121.157(f)(2)	20 DEC 2010	Type certificated in the Normal Category, complies with SFAR 41, and meets performance requirements of Appendix K to Part 121.	Performance data in the FAA Approved POH/AFM (P/N 114-590021-57 and associated supplements) meets Appendix K Performance 4.a. <i>Interim Airplane Performance Operating Limitations</i> until 20 DEC 2010. Performance data in the FAA Approved ICAO POH/AFM (P/N 114-590021-81 and associated supplements) meets Appendix K Performance 5.a. <i>Final Airplane Performance Operating Limitations</i> for an airplane approved per Section 1.(b) of SFAR No. 41 of 14 CFR 21 and complies with the additional requirements of Section 4.(c) of SFAR No.41 and ICAO Annex 8.	ICAO POH/AFM (P/N 114-590021-81) is required after 20 DEC 2010.	Complies
121.173(b)(2)	20 DEC 2010	Comply with § 121.189 through § 121.197 for turbine engine powered airplanes. Exception for § 121.157(f), <i>Other non-transport category airplanes</i> , expires 20 DEC 2010.	Operator responsibility to comply with § 121.189 through § 121.197 for turbine engine powered airplanes.		Operator Responsibility

14 CFR Section	Comply Date	Requirement	Compliance	Remarks	FSB Finding
121.189(c)	20 DEC 2010	Airplane takeoff performance must comply Accelerate/Stop distance, Takeoff Distance, and Takeoff Run.	Operator responsibility to comply with Takeoff Limitations. Performance data in the FAA Approved POH/AFM POH (P/N 114-590021-57 and associated supplements) and FAA Approved ICAO POH/AFM (P/N 114-590021-81 and associated supplements) provides appropriate performance data for operator to use.		Operator Responsibility FAA Approved POH/AFM performance data complies
SFAR 41 Sec. 4C(1)	N/A	Performance in compliance with ICAO Annex 8 at each weight, altitude, and temperature for approach climb and takeoff.	FAA Approved ICAO POH/AFM (P/N 114-590021-81) complies.	ICAO POH/AFM (P/N 114-590021-81) required.	Complies
SFAR 41 Sec 4C(2)	N/A	For gust load design at rough air gust speed V_B , comply with § 25.335(d), § 25.341(a)(1), and § 25.351(b).	1900C original Manufacture Type Design complies.	1900/1900C FAR Requirements Compliance Report.	Complies
SFAR 41 Sec 4C(3)	N/A	For smoke evacuation design comply with § 25.831(d).	1900C original Manufacture Type Design complies.	1900/1900C FAR Requirements Compliance Report.	Complies
SFAR 41 Sec 4C(4)	N/A	For engine rotation and restarting design, comply with § 25.903(c) and (e).	1900C original Manufacture Type Design complies.	1900/1900C FAR Requirements Compliance Report.	Complies
SFAR 41 Sec 4C(5)	N/A	For engine cooling design, comply with § 25.1521(e).	1900C original Manufacture Type Design complies.	1900/1900C FAR Requirements Compliance Report.	Complies