ACT ARC Recommendation 19-1

Revisions to the Flight Standardization Board Report Template

I. Submission

The recommendations below were submitted by the Flight Standardization Board Workgroup (FSB WG) for consideration by the Air Carrier Training Aviation Rulemaking Committee (ACT ARC) Steering Committee at F2F-20, August 14-15, 2019. The ACT ARC Steering Committee adopted the recommendations, and they are submitted to the Federal Aviation Administration (FAA) as ACT ARC Recommendation 19-1.

II. Statement of the Issue

On October 24, 2016, the FAA published Change 1 to Advisory Circular (AC) 120–53B, "Guidance for Conducting and Use of Flight Standardization Board Evaluations." The purpose of Change 1's revisions, as stated in the AC, was to, "remove[] references to currency differences levels and system operator difference requirements (ODR) tables" and replace them with a new set of FAA-defined Differences Tables and to "update[] the elements of Flight Standardization Board (FSB) reports" (FSBR). Change 1 did not significantly modify the legacy processes contained in AC 120–53B. Concurrent with the publication of Change 1, the FAA adopted a new FSBR formatting template. The FAA defined the new template in general terms in the September 14, 2018, revision to FAA Order 8900.1, Volume 8, Chapter 2, Section 5, 8-110(C.), "Contents of the FSB Report". Based on revisions to legacy FSBRs that the FAA has made using the new template, the industry is concerned that the FAA now views FSBRs as applicable primarily to pilot type rating training, intended primarily for internal FAA use, and oriented to the interests of U.S. operators. In recent FSBR revisions, the FAA has reduced or eliminated legacy sections of individual FSBRs with an established history of use.

The revisions to the FSBR template have the practical effect of limiting the scope of FAA Aircraft Evaluation Group (AEG) evaluation results published in the FSBR. This impacts the AEGs' ability to fulfill their responsibilities with respect to operational suitability determinations and evaluation of new and novel aircraft systems and/or operational capabilities requested by industry applicants that have an impact on pilot training in general.

As a technical resource for both FAA Flight Standards and Certification, the scope of the AEG's operational suitability and pilot training responsibilities are quite broad. While the AEG's primary responsibility is to the internal needs of the FAA, it also responds to the requests of aircraft manufacturer applicants (both U.S. and international) and international regulatory authorities. When this involves an operational evaluation or review, the FSBR is the only codified process the AEGs have for documentation and publication of the results. Previously, the AEGs have documented all results of operational evaluations specific to individual aircraft in FSBRs.

The publication of AC120–53B, Change 1 reduced the scope of the FSBR, possibly based on a lack of recognition of its application and use in practice. Participating international manufacturers, air carriers, and regulatory agencies use the FSBR for numerous operational suitability purposes beyond establishment of pilot type rating training. The inability to disseminate the results of AEG evaluations for such purposes limits these parties' access to valuable and necessary operational data.

The recommendations and supporting rationale below are listed as:

1. Short-term recommendations for changes to the current FAA FSBR template that could immediately address the FSB WG's concerns regarding limitations on the scope of material placed into the FSBR.

2. Intermediate-term recommendations for changes to AC 120–53B, Change 1, to recognize, in FAA guidance, the full scope of the document's audience and to incorporate useful data obtained from AEG evaluation results.

III. Recommendation(s)

SHORT-TERM RECOMMENDATIONS

To assist the FSB WG in its development of recommendations for improvement of the FSBR, the FAA provided the FSB WG a draft revised FSBR template as a baseline for its efforts. The provided template represents a concept under consideration by the FAA, and has not been used to generate any published FSBRs, but it is largely representative of the content of recently published FSBRs. The references to sections and items in the recommendations below refer to the draft template, which is included as Attachment 1 to this document.

Recommendation FSB 1.a:

The ACT ARC recommends that the FAA revise the Flight Standardization Board (FSB) Report Template as follows:

Template – Instructions, General Section, item 3
Change "intended audience" to read, "FAA inspectors (principal operations inspectors (POI) or training center program managers (TCPM)), *aircraft operators and training providers, original equipment manufacturers (OEM), and other regulatory agencies*."
Rationale: Expand the scope to the full legacy FSBR audience and the full audience of interested industry stakeholders.

Template – Instructions, General Section, item 4
Change to read, "Information that is available in Regulations or other FAA documents, such as Orders and Advisory Circulars, should not be restated in the FSB Report *unless proposed and justified by the applicant for clarity and understanding by the intended audience*"
Rationale: This original statement is intended to avoid duplication of current FAA policy and guidance that might cause confusion and is deemed unnecessary. However, the inclusion of certain references deemed necessary by the OEM or deemed appropriate for the full understanding of the entire intended audience should be considered.

Template – Instructions, Section 9.5
Add phrase, “Some training requirements are not applicable to all aircraft and must be listed in the FSB Report. *At a minimum*, the following areas should be reviewed:”
Rationale
Broaden the possible scope of issues.

Template – FSB Report, 2. Introduction, last paragraph
Add a new item to the list of “determinations for use by”: “4) OEM applicants as a record of evaluation results.”
Rationale: Support the acknowledgement of the entire FSBR audience.

Template – FSB Report, 3. Highlights of Change
a. Change wording in italics to read, "Describe only highlights of each substantive change"
b. Change wording in italicized note to read, “It is not necessary to include the full details of each change to the document. However, sufficient detail of each substantive change necessary to inform the reader must be included."
c. Delete the sentence, “They are already indicated in the Record of Revisions sections and change bars in the report body.”
Rationale: In order to maintain continuity of the data and results in individual FSBR revisions, there should be an opportunity to fully explain substantive changes to the document that are understandable by the entire FSBR audience.

Template – FSB Report, 5. Acronyms
Change wording in italics at top of list to, “The following list should be included as a minimum.”
Rationale: Express that other legitimate acronyms may be added.

Template – FSB Report, Definitions 6.7 Operational Suitability
Delete the descriptor, “AEG” for operational suitability determination.
Rationale: Operational suitability is a concept and not a definition based on a determination by a particular entity.

Template – FSB Report, 9. Pilot Training, 9.3 Landing from a No Flap or Non Standard Flap Approach
Make this a sub-section under "Special Flight Characteristics."
Rationale: This section, 9.3 should not be its own section but rather fall under 9.4 as 9.4.1. There is no reason to emphasize no/non-standard flap approaches as something unique from 9.4.

Template – FSB Report, 12. Operational Suitability
Change the paragraph to read, “The FSB determined operational compliance by conducting an evaluation of aircraft *during the period* [XX – XX/XX/XXXX].
Rationale: Operational suitability encompasses numerous opportunities to fly both the full flight simulator (FFS) and proposed flight training devices (FTD), as well as more than one aircraft. This determination is made over a period of time and FSB exposure to numerous aircraft and Flight Simulation Training Devices (FSTD).

Template – FSB Report, 13 Miscellaneous

Add to the italicized note at the end, ""Examples of such determinations are…"
Add the following subjects to the list that follows, "Ditching", "Emergency Equipment", "Electronic Flight Bag (EFB)" and, "UPRT/Stall training".
Rationale: Broaden the possible scope of issues to include known AEG responsibilities.

Template – FSB Report, Appendix 2
After the Master Differences Requirements (MDR) Tables for the specific Base/Candidate aircraft comparison add a header, "MDRs (previously evaluated) between other [aircraft make] products".
Rationale: Historically the FSBR has been used by the OEM and both international and U.S. operators as a single source of FAA-evaluated related aircraft differences within an entire OEM's fleet of aircraft. Excluding this information in favor of only the current base/candidate aircraft comparison unduly limits the scope and value of the FSBR.

Template – FSB Report, Appendix 3
a. Retitle this appendix (and in Table of Contents) to read, "FAA Differences Tables and Operator Difference Tables (ODR) by reference (if applicable)."
b. Add a "Section 1" for FAA Difference Tables and a "Section 2" for "Manufacturer ODR references".
Rationale: The OEM ODRs are the building blocks of successful pilot training elements and as such are a significant set of guidance for all aircraft operators, including U.S. operators. OEM ODRs contain significantly more data than the FAA Difference Tables and, in the case of authorities partnering in joint FSB evaluations, are fully applicable to U.S. operators. Their inclusion, at least by reference, gives the U.S. operator the opportunity to evaluate its training programs in a more detailed and timely manner.

Template – FSB Report, Appendix 4
a. Under "Additional Appendices" (first paragraph), add to the list of "follow-on evaluations of items": "Ditching", "Emergency Equipment", "Electronic Flight Bag (EFB)", "UPRT/Stall training".
b. Under "Additional Appendices" (first paragraph), change the phrase, "is seeking training or checking credit for" to "is seeking reductions in training or checking for"
Rationale: Provide for a better understanding of what can be achieved by a successful FSB evaluation of applicants' proposed comparisons between aircraft or systems.

INTERMEDIATE-TERM RECOMMENDATIONS

Recommendation FSB 1.b:

The FAA should revise AC 120–53B, Change 1 to acknowledge both the scope of AEG responsibilities and audience of industry stakeholders interested in AEG evaluations of aircraft and aircraft systems. The AC should incorporate language that supports the FSB WG recommended changes to the FSB template. Specific recommendations include:

Section 3. Focus.
The AC should acknowledge the audience by including a reference in this section. Add to the first sentence so that it reads, "This AC addresses aircraft manufacturers or modifiers who design, test, and certificate transport aircraft, *as well as training centers having programs approved under the CFRs. The results of the evaluations conducted under this guidance and*

the application of suitable credits or constraints to pilot training may also be of interest to regulatory authorities or operators having similar aircraft."

Rationale.
Since the publication of AC 120–53 in May 1991, the principles and processes described in the AC have been the benchmark for assessing applicant programs that request suitable credits for pilot training between aircraft that have similar handling characteristics and system architecture. In the absence of their own processes, national civil aviation authorities have looked to the FSBR as credible justification for their own operators' training programs. As some regulatory authorities have matured and adopted similar guidance, joint evaluations have taken place where results have created common approvals across international operators. Such developments have made the FSBR a common denominator among authorities and have greatly increased the interest in its data and results. Consequently, the FSBR audience is not limited to the FAA and U.S. operators.

Section 1. Purpose, b.
Include a statement that allows for an OEM certifying aircraft that might not be operated under Title 14 Code of Federal Regulations (14 CFR) part 121 to apply for an AEG evaluation between aircraft with different type certificates.
Rationale: The evaluation standards described in the AC and used by the FAA and other regulatory authorities are specific only to the aircraft's performance and design and not the operational environment of the aircraft. The FAA's processes should allow for acceptance of any OEM applicant, regardless of aircraft operations. Regardless of the outcome of such an evaluation, if an air carrier determines additional models (not included in an FSBR) are appropriate for Related Aircraft Differences Training in their operation, they can still seek approval (outside the FSB evaluation process) under the applicable rule (§ 121.418, § 135.323(d), or § 91.1073(d)).

Section 4. Discussion.
Change the first sentence to read, "When requested by industry, the Flight Standards Service (AFX) of the FAA, through the Aircraft Evaluation Groups (AEG), undertakes analyses of new and related aircraft and their associated systems for the purpose of providing recommendations for pilot training and qualification *and a determination of operational suitability based on the operational part of 14 CFR under which the aircraft or system(s) will operate*."
Rationale: The FAA should address and support the full complement of AEG responsibilities in the AC. The FAA should fully acknowledge the operational suitability responsibilities and the possible scope of an FSB activity for conducting, documenting, and publishing the results of any evaluations conducted in accordance with these responsibilities.

The recommendations provided in this document about integrated AEG/FSB activities are complementary to input from the Department of Transportation Special Committee, Joint Authorities Technical Review (JATR), and Safety Oversight and Certification Aviation Rulemaking Committee (SOC ARC).

V. Background Information

ACT ARC Recommendation FSB-1 addresses Paragraph 2 in the FSB WG Scope of Work and ACT ARC Initiative #43 (see below):

FSB WG Scope of Work:

1. Examine how the FAA could improve its current product (FSB Report) to meet the interests of all stakeholders.

ACT ARC Initiatives:

- Initiative #43: Examine how the FAA could improve its current Flight Standardization Board (FSB) Process and product (FSB Report) to meet the interests of all stakeholders.

The following pages contain a draft FSBR template developed by the FAA. The FAA is considering the use of a template for future FSBRs. This template has not been used to generate any published FSBR, and is provided for reference purposes only.

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Template Revision 1 XX/XX/XXXX. Refer to the document titled "FSB Report Template Instructions" for instructions on how to use this template.

U.S. Department of Transportation Federal Aviation Administration Washington, DC

Flight Standardization Board (FSB) Report

Revision: [X]
Date: [XX/XX/XXXX]

Manufacturer

[Name]

Type Certificate Data Sheet (TCDS)	TCDS Identifier	Marketing Name	Pilot Type Rating
[T00003NY]	[BD-700-1A10]	[Global Express]	[BBD-700]
[T00003NY]	[BD-700-1A11]	[Global 5000]	[BBD-700]

For multiple TCDs, TCDS Identifiers, Marketing Names, and/Pilot Type Ratings, insert new rows.

Approved By the Aircraft Evaluation Division
Federal Aviation Administration
[Small Aircraft, Transport Aircraft Seattle, Transport Aircraft Long Beach, Rotorcraft and Powered Lift] Aircraft Evaluation Group
[Street Address]
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TABLE OF CONTENTS

1. RECORD OF REVISIONS 3
2. INTRODUCTION 3
3. HIGHLIGHTS OF CHANGE 3
4. BACKGROUND 3
5. ACRONYMS 3
6. DEFINITIONS 4
7. PILOT TYPE RATING 5
8. RELATED AIRCRAFT 6
9. PILOT TRAINING 6
10. PILOT CHECKING 8
11. PILOT CURRENCY 10
12. OPERATIONAL SUITABILITY 10
13. MISCELLANEOUS 10
APPENDIX 1 DIFFERENCES LEGEND 12
APPENDIX 2 MASTER DIFFERENCES REQUIREMENTS (MDR) TABLE 14
APPENDIX 3-A DIFFERENCES TABLES FROM [BASE AIRCRAFT NAME] TO [RELATED AIRCRAFT NAME] 15

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1. RECORD OF REVISIONS

Revision Number	Sections(s)	Date
[Original]	[All]	[XX/XX/XXXX]
[1]	[3, 8.1, Appendix 2]	[XX/XX/XXXX]

2. INTRODUCTION

Aircraft Evaluation Groups (AEGs) are responsible for working with aircraft manufacturers and modifiers, during the development and FAA certification of new and modified aircraft to determine: 1) the pilot type rating, 2) flightcrew member training, checking, and currency requirements, and 3) operational suitability.
This report lists those determinations for use by: 1) FAA employees who approve training programs, 2) FAA employees and designees who certify airmen, and 3) aircraft operators and training providers, to assist them in developing their flightcrew member training, checking and currency.

3. HIGHLIGHTS OF CHANGE

Describe highlights only.

[This is the original [aircraft name] FSB Report.]
OR

[The purpose of this revision is to add Avionics Software version X.X.]

Do not include the details of every change to the document. They are already indicated in the Record of Revisions section and change bars in the report body. Do not include highlights from previous revisions.

4. BACKGROUND

The [Small Aircraft, Transport Aircraft Seattle, Transport Aircraft Long Beach, Rotorcraft and Powered Lift] AEG formed a Flight Standardization Board (FSB) that evaluated the [aircraft name] as defined in FAA Type Certificate Data Sheet (TCDS) # [XXXXXXXX]. The evaluation was conducted during [months/years] using the methods described in FAA Advisory Circular (AC) 120-53 [A, B, etc.] [Change X], Guidance for Conducting and Use of Flight Standardization Board Evaluations. *If the date is unknown, it can be left out.*

Each subsequent evaluation of revised software, systems or related aircraft should have an additional paragraph describing who, what, when, and how. Previous background paragraphs should be retained so each evaluation is included in the background.

[In [months/years] the FSB conducted flight evaluations of Avionics Software version "X" in a [aircraft name]. This software added Synthetic Vision Primary Flight Display (SV PFD). It, as well as the associated Airplane Flight Manual (AFM) change, was found to be operationally suitable. Training, checking, and currency requirements are listed in Appendix XX.]

5. ACRONYMS

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Include all acronyms that appear in this report.

- [AC Advisory Circular
- ACFT Aircraft
- ACS Airman Certification Standards
- AEG Aircraft Evaluation Group
- AFM Airplane Flight Manual
- ATP Airline Transport Pilot
- AV Audiovisual Presentation
- CPT Cockpit Procedures Trainers
- FAA Federal Aviation Administration
- FFS Full Flight Simulator
- FLT CHAR Flight characteristics
- FSB Flight Standardization Board
- FSTD Flight Simulation Training Device
- FTD Flight Training Device
- HO Operating Manual Revision or Flight Crew Operating Bulletin
- ICBI Interactive (full task) Computer Based Instruction
- MDR Master Differences Requirements
- NAS National Airspace System
- PROC CHG Procedures change
- PTS Practical Test Standards
- PTT Part Task Trainers
- STC Supplemental Type Certificate
- SU Stand-Up Instruction
- TC Type Certificate
- TCBI Tutorial Computer Based Instruction
- TCDS Type Certificate Data Sheet
- 14 CFR Title 14 Code of Federal Regulations]

6. DEFINITIONS

These definitions are for the purposes of this report only.

6.1 Base Aircraft. An aircraft identified for use as a reference to compare differences with another aircraft.

6.2 Current. A crewmember meets all requirements to operate the aircraft under the applicable operating part.

6.3 Differences Tables. Describe the differences between a pair of related aircraft, and the minimum levels operators must use to conduct differences training and checking of flightcrew members. Difference levels range from A to E.

6.4 Master Differences Requirements (MDR). Specifies the minimum levels of training and checking required between a pair of related aircraft, derived from the highest level in the Differences Tables.

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6.5 Mixed Fleet Flying. The operation of a base aircraft and one or more related aircraft for which credit may be taken for training, checking, and currency events.

6.6 Operational Evaluation. The AEG process to determine pilot type rating, minimum flightcrew member training, checking and currency requirements, and unique or special airman certification requirements (e.g., specific flight characteristics, no-flap landing).

6.7 Operational Suitability. The AEG determination that an aircraft or system may be used in the National Airspace System (NAS) and meets the applicable operational regulations (e.g., 14 CFR parts 91, 121, 133, 135).

6.8 Qualified. A flightcrew member holds the appropriate airman certificate and ratings as required by the applicable operating part.

6.9 Related Aircraft. Any two or more aircraft of the same make with either the same or different type certificates that have been demonstrated and determined by the Administrator to have commonality.

6.10 Seat Dependent Tasks. Maneuvers or procedures using controls that are accessible or operable from only one flightcrew member seat.

6.11 Special Emphasis Area. A training requirement unique to the aircraft, based on a system, procedure, or maneuver, which requires additional highlighting during training. It may also require additional training time, specialized flight simulation training devices (FSTD) or training equipment.

6.12 Specific Flight Characteristics. A maneuver or procedure with unique handling or performance characteristics that the FSB has determined must be checked.

6.13 Variation(s) of the Aircraft Type. A variation of the aircraft type is a modified aircraft or group of aircraft with the same type certificate as the base aircraft.

7. PILOT TYPE RATING

7.1 Type rating. [The [aircraft name] type rating designation is [type rating designation].] [The [aircraft name] was not evaluated by the FSB and no type rating determination was made.]
OR
[Not applicable.]

7.2 Common type ratings. [In accordance with the provisions of FAA Order 8900.1 and AC 120-53 (current edition), the [type rating designation] and the [type rating designation] are separate type ratings that have been determined to have commonality.]
OR
[Not applicable.]

7.3 Military equivalent designations. Military aircraft that qualify for the [type rating designation] can be found on the faa.gov website under Licenses and Certificates, Airmen

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Certification, Online Services, Aircraft Type Rating Designators. This webpage is kept up to date and can be found at http://www.faa.gov/licenses_certificates/airmen_certification/.

If aircraft does have a type rating, delete paragraph and enter "Military equivalent designations. Not applicable."

8. RELATED AIRCRAFT

8.1 Related Aircraft on same TCDS. [The [aircraft name] is related to the [aircraft name].
OR
[Not applicable.]

8.2 Related Aircraft on different TCDS. [The [aircraft name] is related to the [aircraft name].
OR
[Not applicable.]

9. PILOT TRAINING

9.1 Airman Experience *It may be necessary to tell the reader what previous pilot experience the FSB evaluation was predicated upon.*

[Airmen receiving initial [aircraft name] training should have [XX hours of [multi-engine transport turbojet aircraft, new generation avionics, high altitude operations, military, Flight Management System (FMS)] experience]. [Pilots without this experience may require additional training.]

[Airmen receiving [differences, upgrade, transition] [aircraft name] training are assumed to have previous experience in [aircraft name, multi-engine transport turbojet aircraft, new generation avionics, high altitude operations, military, Flight Management System (FMS)]. [Pilots without this experience may require additional training.]
OR
[There are no additional airman experience requirements for the [aircraft name] other than those already specified in parts [61, 121, 125, 133, and 135.]

9.2 Special Emphasis Areas
Specify when special emphasis areas are to be accomplished e.g. initial training, transition training, differences training, upgrade training, and/or recurrent training.

Pilots must receive special emphasis on the following areas during ground training:
[Automatic emergency descent procedure - The autopilot may disconnect due to angle of attack protection activation if the speed brake is rapidly deployed. This item must be included in initial training.]

Pilots must receive special emphasis on, and perform the following areas during flight training:
[Flight Control Modes – This aircraft utilizes fly-by-wire flight controls. It is important to thoroughly understand the operation of the aircraft in each of the flight control modes. This item must be included in initial and recurrent training.]
[Automatic emergency descent procedure - The autopilot may disconnect due to angle of attack protection activation if the speed brake is rapidly deployed. This item must be included in initial training.]

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OR
[There are no special emphasis areas.]

9.3 Landing from a No Flap or Non Standard Flap Approach
[The probability of flap extension failure on the [aircraft name] is not extremely remote due to system design. Therefore, flight training should include a no flap approach and landing. Refer to Order 8900.1, Volume 5 when the training is conducted in an aircraft versus an FFS.]
OR
[The probability of flap extension failure on the [aircraft name] is extremely remote due to system design, therefore flight training of a no flap approach and landing is not required. However, flight training should include a partial flap approach and landing using [configuration]. Refer to Order 8900.1, Volume 5 when the training is conducted in an aircraft versus an FFS.]
OR
[The probability of flap extension failure on the [aircraft name] is extremely remote due to system design. Therefore, flight training of a no flap approach and landing is not required.
OR
[Not applicable.] *This option is only intended for aircraft without flap systems.*

9.4 Specific Flight Characteristics
Maneuvers/Procedures required to be checked as referenced in the ATP and Type Rating PTS or ACS, as applicable, [and/or Appendix F of part 121].
[Sub to supersonic transition and powered lift (tilt rotor) transition from vertical to horizontal flight]
OR
[There are no specific flight characteristics.]

9.5 Seat Dependent Tasks
Specify when seat dependent tasks are to be accomplished e.g. initial training, transition training, differences training, upgrade training, and/or recurrent training.

[Pilots must receive training in these seat dependent tasks:]
a) [Head Up Guidance Display (left seat); initial, differences, upgrade, and recurrent training]
b) [Passenger Oxygen System activation (right seat); initial training]
c) [Manual Landing Gear Extension (right seat); initial and recurrent training]
d) [Nosewheel steering (left seat); initial, transition, upgrade, and recurrent training]
OR
[There are no seat dependent tasks]

9.6 Other Training Items
Before using this section, ensure that existing Sections, Difference Tables, or use of an appendix has been considered. This section is intended to provide additional training information that does not fit into other sections of this report. If none, state "None." Sub-section numbers (e.g., 9.6.1) must be used by selecting the Home tab, style "Heading 3."

9.7 Regulatory Training Requirements Which Are Not Applicable to the [aircraft name]

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See separate instructions for the list of regulatory requirements to review. Give examples of acceptable substitutes to attain the same level of knowledge/skill/ability as the original requirement.

[Part 121, Appendix E]
[Tuck and Mach buffet. Demonstration of the aircraft's overspeed protection capabilities is an acceptable substitute.]

[Part 135]
OR
[None]

9.8 Flight Simulation Training Devices (FSTD)
This section is intended to identify specific FSTDs that must be used to train specific aircraft systems, procedures, or maneuvers.
[Head Up Display must be trained in a level C or higher FFS in both day and night conditions.]
OR
[There are no specific systems, procedures, or maneuvers that are unique to the [aircraft name] that require a specific FSTD for training.]

9.9 Training Equipment
This section is intended to identify specific training equipment that may be used to train specific aircraft systems or procedures.
[Cabin entry door trainer]
OR
[There are no specific systems or procedures that are unique to the [aircraft name] that require specific training equipment.]

9.10 Differences Training Between Related Aircraft
[Pilots must receive differences training between the [aircraft name] and [aircraft name]. *Repeat as necessary for multiple aircraft*. The level of training is specified in Appendix 3, Differences Tables.]
OR
[There are no differences training required between the [aircraft name] and [aircraft name].
OR
[Not applicable.]

10.PILOT CHECKING

Specify when checking items are to be accomplished e.g. initial checking, transition checking, differences checking, upgrade checking, and/or recurrent checking. Some checking items are always required.

10.1 Landing from a No Flap or Non Standard Flap Approach

[The probability of flap extension failure on the [aircraft name] is not extremely remote due to system design. Therefore, demonstration of a no flap approach and landing during pilot certification is required. During a [§§ 61.58 proficiency check, 91.1065 competency check,

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121.441 proficiency check,125.287 competency check, or 135.293 competency check], this task may be required.
Refer to Order 8900.1, Volume 5 when the test or check is conducted in an aircraft versus an FFS.]
OR
[The probability of flap extension failure on the [aircraft name] is extremely remote due to system design therefore, demonstration of a no flap approach and landing is not required. However, a partial flap approach and landing using [configuration] is required during pilot certification. During a [§§ 61.58 proficiency check, 91.1065 competency check, 121.441 proficiency check, 125.287 competency check, or 135.293 competency check], this task may be required.
Refer to Order 8900.1, Volume 5 when the test or check is conducted in an aircraft versus an FFS.]
OR
[The probability of flap extension failure on the [aircraft name] is extremely remote due to system design. Therefore, demonstration of a no flap approach and landing during pilot certification is not required.]
OR
[Not applicable.] *This option is only intended for aircraft without flap systems.*

10.2 Specific Flight Characteristics

Maneuvers/Procedures required to be checked as referenced in the ATP and Type Rating PTS or ACS, as applicable [and/or Appendix F of part 121].
[Sub to supersonic transition and powered lift (tilt rotor) transition from vertical to horizontal flight]
OR
[There are no specific flight characteristics.]

10.3 Seat Dependent Tasks

[Pilots must be checked in these seat dependent tasks:]
a) [Head Up Guidance Display (left seat); initial and recurrent checking]
b) [Passenger Oxygen System activation (right seat); initial checking]
c) [Manual Landing Gear Extension (right seat), initial and recurrent checking]
d) [Nosewheel steering (left seat), initial, transition, upgrade, differences, and recurrent checking]
OR
[There are no seat dependent tasks.]

10.4 Other Checking Items

Before using this section ensure that existing Sections, Difference Tables, or use of an appendix has been considered. This section is intended to provide additional checking information that does not fit into other sections of this report. If none, state "None." Sub-section numbers (e.g., 10.4.1) must be used by selecting the Home tab, style "Heading 3."

10.5 Flight Simulation Training Devices (FSTD)

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This section is intended to identify specific FSTDs that must be used to check specific aircraft systems, procedures, or maneuvers.

[Head Up Display must be checked in minimum of a level C full flight simulator in both day and night conditions.]
OR
[There are no specific systems, procedures, or maneuvers that are unique to the [aircraft name] that require a specific FSTD for checking.]

10.6 Differences Checking Between Related Aircraft

[Pilots must receive difference checking between the [aircraft name] and [aircraft name]. The level of checking is specified in Appendix 3 Differences Tables.]
OR
[There are no differences checking required between the [aircraft name] and [aircraft name].
OR
[Not applicable.]

11.PILOT CURRENCY

[There are no additional currency requirements for the [aircraft name] other than those already specified in parts [61, 121, 125, 133, and 135].]
OR
[Pilots must maintain currency in the following:]
[Steep Approaches - X steep approaches within x months]

11.1 Differences Currency Between Related Aircraft

[Pilots must receive differences currency between the [aircraft name] and [aircraft name] as follows: [two line segments in each aircraft as the pilot flying].
AND/OR

[Pilots must receive differences currency for Mixed Fleet Flying (MFF) of the [aircraft name] and [aircraft name] as follows: [two line segments in relevant airplanes or approved full flight simulator(s) every 90 days].
OR
[Not applicable.]

12.OPERATIONAL SUITABILITY

The [aircraft name] is operationally suitable for operations under parts [91, 121, 125, 133, 135 and 137]. The FSB determined operational compliance by conducting an evaluation of aircraft serial number [XXXX] on [XX/XX/XXXX]. *If the aircraft serial number and/or date are unknown, they can be left out.* The list of operating rules evaluated is on file at the [Small Aircraft, Transport Aircraft Seattle, Transport Aircraft Long Beach, Rotorcraft and Powered Lift] AEG.

13.MISCELLANEOUS

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This section is intended for other determinations that do not fit into other sections of this report. If none, state "None." Sub-section numbers (e.g., 13.1) must be used by selecting the Home tab, style "Heading 2."

[Flight Crew Rest Facilities (part 117)]/Flight Crew Sleeping Quarters (part 121, subpart R)/Flight Crew Sleeping Facilities (part 135)] – [The [aircraft name] [identify location and type of facility] as installed by [TCXXX/STCXXX] has been evaluated and determined to meet requirements of part [91K, 117, 121, 125, 135], Advisory Circular (AC) [117-1, 121-31] [A, B, etc.] [Change X], and Order 8900.1.]

[Forward Observer Seat]
[The [aircraft name] forward [specify location if multiple seats] observer seat as installed by [TCXXX/STCXXX] has been evaluated and determined to meet requirements of [§§ 121.581(a), 125.317(b), 135.75(b)] and Advisory Circular (AC) 120-83.] *If more than one observer seat, identify primary forward observer seat.*

OR
[No forward observer seat was evaluated.]

[Aircraft Approach Category]
[The [aircraft name] is considered a Category [A, B, C, D, E] aircraft for the purposes of determining the appropriate instrument approach procedure category in accordance with § 97.3.]

[Emergency Evacuation]
[A full scale emergency evacuation was successfully completed on the [aircraft name] by [Manufacturer] on [date]. The aircraft was configured with [XX] passenger seats and [XX] flight attendants. The demonstration complied with § 121.291(a).]

[Normal Landing Flaps]
[The [aircraft name] normal "final landing flap setting" per § 91.126(c) is/are [Flap setting(s)]. *Per § 91.126(c), this is only applicable to turbojet-powered aircraft.*

APPENDIX 1 DIFFERENCES LEGEND

Training Differences Legend

Differences Level	Type	Training Method Examples	Conditions
A	Self-instruction	• Operating manual revision (HO) • Flight crew operating bulletin (HO)	• Crew has already demonstrated understanding on base aircraft (e.g. updated version of engine). • Minor or no procedural changes required. • No safety impact if information is not reviewed or is forgotten (e.g. different engine vibration damping mount). • Once called to attention of crew, the difference is self-evident.
B	Aided instruction	• Audiovisual presentation (AV) • Tutorial computer based instruction (TCBI) • Stand-up instruction (SU)	• Systems are functionally similar. • Crew understanding required. • Issues need emphasis. • Standard methods of presentation required.
C	Systems Devices	• Interactive (full-task) computer based instruction (ICBI) • Cockpit procedures trainers (CPT) • Part task trainers (PTT) • Level 4 or 5 flight training device (FTD 4-5)	• Training can only be accomplished through systems training devices. • Training objectives focus on mastering individual systems, procedures, or tasks versus highly integrated flight operations or “real-time” operations. • Training devices are required to assure attainment or retention of crew skills to accomplish more complex tasks usually related to aircraft systems.
D	Maneuvers Devices	• Level 6 or 7 flight training device (FTD 6-7) • Level A or B full flight simulator (FFS A-B)	• Training can only be accomplished in flight maneuver devices in a real-time environment. • Training requires mastery of interrelated skills versus individual skills. • Motion, visual, control loading, and specific environmental conditions may be required.
E	Level C/D FFS or Aircraft	• Level C or D full flight simulator (FFS C-D) • Aircraft (ACFT)	• Motion, visual, control loading, audio, and specific environmental conditions are required. • Significant full task differences that require a high fidelity environment. • Usually correlates with significant differences in handling qualities.

Checking Differences Legend

Differences Level	Checking Method Examples	Conditions
A	None	None
B	• Oral or written exam • Tutorial computer based instruction self-test (TCBI)	• Individual systems or related groups of systems.
C	• Interactive (full-task) computer based instruction (ICBI) • Cockpit procedures trainers (CPT) • Part task trainers (PTT) • Level 4 or 5 flight training device (FTD 4-5)	• Checking can only be accomplished using systems devices. • Checking objectives focus on mastering individual systems, procedures, or tasks.
D	• Level 6 or 7 flight training device (FTD 6-7) • Level A or B full flight simulator (FFS A-B)	• Checking can only be accomplished in flight maneuver devices in a real-time environment. • Checking requires mastery of interrelated skills versus individual skills. • Motion, visual, control loading, and specific environmental conditions may be required.
E	• Level C or D full flight simulator (FFS C-D) • Aircraft (ACFT)	• Significant full task differences that require a high fidelity environment.

APPENDIX 2 MASTER DIFFERENCES REQUIREMENTS (MDR) TABLE

These are the minimum levels of training and checking required, derived from the highest level in the Differences Tables in Appendix 3. Differences levels are arranged as training/checking.

To Related Aircraft ↓	**From Base Aircraft →**	[XXX]	[YYY]	[ZZZ]
[XXX]		[Not applicable]	[B/A]	[Not evaluated]
[YYY]		[A/B]	[Not applicable]	[B/C]
[ZZZ]		[C/B]	[C/B]	[Not applicable]

Footnotes and/or other limitations may be inserted here.

If related aircraft have not been identified in Section 8, Related Aircraft, delete table and enter "Not applicable."

The related aircraft rows should only list aircraft which are part of the TCDS shown on the FSBR cover page; this includes variations or modifications, that may or may not be listed on the TCDS or on the FSBR cover page. See examples below.

Example 1 – The FSBR cover page identifies the TCDS for the A330.

To Related Aircraft ↓	**From Base Aircraft →**	A320	A330	A340	A350
A330		C/C	A/A	D/C	Not evaluated

Example 2 – The FSBR cover page identifies the TCDS for the B767.

To Related Aircraft ↓	**From Base Aircraft →**	757-200ADV	767-300	767-300LDS	767-400
767-300		Not Evaluated	Not Applicable	Not Evaluated	C/B
767-300LDS		C/C	C/C	A/A	B/B
767-400		D/C	C/B	B/A	B/A

APPENDIX 3-A DIFFERENCES TABLES From [Base Aircraft Name] to [Related Aircraft Name]

Use a sub-appendix 3 for each combination of "from base aircraft to related aircraft." Each sub-appendix will include a design table and maneuver table, as applicable. Each successive sub-appendix should be labeled with a letter (e.g., 3-A, 3-B) and include the base aircraft and related aircraft in the title. 2.When adding Additional Appendices, use style "Appendix" for the heading (e.g., Appendix 3-B) to enable the new appendix to automatically appear on the table of contents.

The Differences Tables should only include design items and maneuvers for which there is a difference. If there is no change from the base aircraft to the related aircraft for a specific design item or maneuver, do not include that design item or maneuver on the Differences Table.

If the FSB determined that for a design item or maneuver, a specific training or checking method within the Differences Level (as shown in Appendix 1) was required, the specific method should be included in the Differences Table. For example, the Design Table below indicates for Indicating/Recording Systems, the checking differences level is C, but an FTD 5 is the required method.

FLT CHAR – Are flight characteristics affected by this difference? Yes No PROC CHNG – Do procedures change because of this difference? Yes No

This Design Differences table, from the [base aircraft name] to the [related aircraft name], was proposed by [Manufacturer, Modifier, Training Provider] and validated by the FSB on [date(s)]. It lists the minimum differences levels operators must use to conduct differences training and checking of flightcrew members.

FROM BASE AIRCRAFT: [YYY] **TO RELATED AIRCRAFT: [ZZZ]**	**DESIGN**	**REMARKS**	**FLT CHAR**	**PROC CHNG**	**TRAINING**	**CHECKING**
	[Autoflight]	[TOGA Flight Director Command Bars initiate at 12 degrees vs. 8 degrees]	[No]	[No]	[A]	[A]
	[Communications]	[New audio system]	[No]	[Yes]	[B]	[A]

FROM BASE AIRCRAFT: [YYY] TO RELATED AIRCRAFT: [ZZZ]	DESIGN	REMARKS	FLT CHAR	PROC CHNG	TRAINING	CHECKING
	[Communications]	[Radio tuning accomplished through RFMUs]	[No]	[Yes]	[C]	[A]
	[Indicating/Recording Systems]	[Electronic Checklist has auto pop-up feature]	[No]	[Yes]	[B]	[A]
	[Indicating/Recording Systems]	[Engine parameters available on either RFMU]	[No]	[Yes]	[C CPT or PTT]	[C FTD 5]

If related aircraft have <u>not</u> been identified in Section 8, Related Aircraft, delete Differences tables and enter "Not applicable."

This Maneuver Differences table, from the [base aircraft name] to the [related aircraft name], was proposed by [Manufacturer, Modifier, Training Provider] and validated by the FSB on [date(s)]. It lists the minimum differences levels operators must use to conduct differences training and checking of flightcrew members.

FROM BASE AIRCAFT: [YYY] **TO RELATED AIRCRAFT: [ZZZ]**	**MANUEVER**	**REMARKS**	**FLT CHAR**	**PROC CHNG**	**TRAINING**	**CHECKING**
	[Preflight Inspection]	[Exterior inspection adds tailskid]	[No]	[Yes]	[A]	[A]
	[Normal Takeoff]	[Optional use of autothrottles]	[No]	[Yes]	[C CPT]	[C]
	[Normal Takeoff]	[Flaps 1 not certified for takeoff]	[No]	[No]	[A]	[A]
	[Non-Normal]	[Optional autopilot saturation alert]	[No]	[Yes]	[B]	[B]
	[All Phases of Flight]	[Addition of variable position speed brake]	[Yes]	[Yes]	[D]	[D]

ADDITIONAL APPENDICES – To be used for follow-on evaluations of items such as steep approach, Search and Rescue software, mixed fleet flying, new avionics software, partial proficiency check, addition of HUD, Flight Attendant, Flight Engineer, Aircraft Dispatcher, additional pilot, or hoist operator, crew stations required for Search and Rescue (SAR), or External Load Operators, loadmaster etc..

If the manufacturer, modifier, or training provider is seeking training or checking credit for emergency equipment such as door trainers or the cabin has unique features requiring evaluation, contact the Air Transportation Division (AFS-200) Manager for assistance.

Not to be used for samples of complete syllabi of acceptable initial or differences training curriculums. One exception would be new technologies without any existing guidance or regulations.

Not to be used for historical records of FSB activities.

When adding Additional Appendices, use style "Appendix" for the heading (e.g., Appendix 4) to enable the new appendix to automatically appear on the table of contents.

Additional appendices should use the same format as the main body of the report. The following sections should be included, as applicable:

- *Background*
- *Pilot Type Rating*
- *Related Aircraft*
- *Pilot Training*
- *Pilot Checking*
- *Pilot Currency*
- *Operational Suitability*

If a subsequent evaluation results in a change to the minimum level of training or checking in the MDR table, then the Differences Table for the subsequent evaluation must be included in Appendix 3 and the MDR Table in Appendix 2 must be updated.

General

1. This is a template for the Flight Standardization Board (FSB) Chair to use to develop the FSB Report.
2. Each report must apply to only one Type Certificate Data Sheet (TCDS) on the Cover Page.
3. The FSB Report should be written in a manner that is easy to use by its intended audience; a principal operations inspector (POI) or training center program manager (TCPM).
4. Information that is available in Regulations or other FAA documents, such as Orders and Advisory Circulars, should not be restated in the FSB Report.
5. Normal text is standard to all reports and must not be modified or removed.
6. [Bracketed] text is an example to the FSB Chair that must be completed, or removed if not applicable.
7. *Italicized text is instruction to the FSB Chair which must be removed.*
8. In each instance of "[aircraft name]", the FSB Chair should enter the name(s) from the Cover Page table applicable to the specific sentence. TCDS identifier(s) and/or marketing name(s) may be used. Use consistent name(s) throughout the report.
9. To maintain consistency throughout reports, do not change numbering of sections. Sub-section numbers (e.g. 13.1) must be used by selecting the Home tab, style "Heading 2" or style "Heading 3" as applicable.
10. Do not add the revision number and date to the header of each page of the report. Section 3 Highlights of Change and the change bars will identify the new information.

Section 508 Compliance

1. The template was developed to meet Section 508 compliance.
2. Save the document as Microsoft Word (i.e., .docx).
3. Use the Heading Styles 1, 2, 3, and Appendix that have been developed.
4. Only one header row is allowed for each table. The table properties have already been preset to repeat the header row at the top of each page if the table exceeds one page. If a specific table exceeds one page, do not enter page breaks; add new rows to the table which will automatically roll over to the next page with the header at the top.
5. The table properties have already been preset to not allow rows to break across pages.

Cover Page

1. To determine the applicable TCDS Identifier(s), review the box in the upper right corner of the TCDS. For example, for TCDS T00003NY, there are two TCDS Identifiers: BD-700-1A10 and BD-700-1A11.
2. The TCDS may list marketing names in the notes. For example, TCDS T00003NY Note 13 indicates the marketing name for the BD-700-1A10 is Global Express and the marketing name for the BD-700-1A11 is Global 5000. Other known marketing names (not listed in the TCDS) may also be included in the table.

Table of Contents

1. The table of contents is automated to include all headings which use style "Heading 1" or "Appendix." The table of contents can be automatically updated by selecting the References tab, "Update Table."
2. When adding Additional Appendices, use style "Appendix" for the heading (e.g., Appendix 4) to enable the new appendix to automatically appear on the table of contents.

Section 9.5 Regulatory Training Requirements Which Are Not Applicable

Some training requirements are not applicable to all aircraft and must be listed in the FSB report. The following areas should be reviewed:

1. Airplanes used in part 121 operations.
    a. Ground Training. Review all subjects in § 121.419(a)(2)(i)-(xiii) to determine if there are any airplane specific subjects that are not applicable to the specific airplane type.
    b. Emergency Training. Review § 121.417 to determine if there is any emergency training that is not applicable to the specific airplane type.
    c. Low-altitude windshear training. Review §§ 121.358, 121.409(d), and 121.424(a)(1) to determine if low-altitude windshear flight training is not applicable to the specific airplane type.
    d. Flight Training. Review all maneuvers and procedures in part 121 Appendix E (Flight Training Requirements) to determine if there are any maneuvers or procedures that are not applicable to the specific airplane type.

2. Aircraft used in part 135 operations.
    a. Ground Training. Review all subjects in § 135.345(b)(1)-(11) to determine if there are any aircraft specific subjects that are not applicable to the specific aircraft type.
    b. Emergency Training. Review § 135.331 to determine if there is any emergency training that is not applicable to the specific aircraft type.
    c. Flight Training. Review all maneuvers and procedures in the Airline Transport Pilot and Aircraft Type Rating Practical Test Standards for Airplane (FAA-S-8081-5F) or Helicopter (FAA-8081-20), or Airman Certification Standards (ACS), as applicable, to determine if there are any maneuvers or procedures that are not applicable to the specific aircraft type.

3. Aircraft used in part 91, subpart K operations.
    a. Ground Training. Review all subjects in § 91.1101(b)(1)-(11) to determine if there are any aircraft specific subjects that are not applicable to the specific aircraft type.
    b. Emergency Training. Review § 91.1083 to determine if there is any emergency training that is not applicable to the specific aircraft type.
    c. Flight Training. Review all maneuvers and procedures in the Airline Transport Pilot and Aircraft Type Rating Practical Test Standards for Airplane (FAA-S-8081-5F) or Helicopter (FAA-8081-20), or Airman Certification Standards (ACS), as applicable, to determine if there are any maneuvers or procedures that are not applicable to the specific aircraft type.

4. Aircraft used in all other operations.
    a. Flight Training. Review the areas of operation applicable to the category and class in § 61.157(e) to determine if there are any areas of operations that are not applicable to the specific aircraft type.