### STC NO. ST00882DE

## **Approved Model List For**

**Automatic Dependent Surveillance - Broadcast (ADS-B) Out System using the Becker Avionics BXT6553 Transponders and a Qualified Position Source** 

STC No. ST00882DE

FAA Approved: See Revision Log

Aerospace Engineer, Denver Aircraft Certification Office

Federal Aviation Administration

Issued: May 29, 2019

### STC NO. ST00882DE

# 1. Revision Log

| Revision | Pages | Description                                   | FAA Approval                          | Date              |
|----------|-------|---|---------------------------------------|-------------------|
| (-)      | ALL   | Initial Release                               |                                       | May 29, 2019      |
|          |       | NOTE THE                                      | SIGNED BY: Todd Dixon                 |                   |
|          |       | NOTE: This revision                           | Manager, Denver ACO Branch            |                   |
|          |       | contains a Cover Page, page ii, and pages 1-5 | Compliance and Airworthiness Division |                   |
| A        | All   | Added addition                                |                                       |                   |
|          | PG 5  | models,                                       | _/s/ C. Bradley (for)                 | November 13, 2019 |
|          |       | (items 7, 8, & 9), to                         | Manager, Denver ACO Branch            | 13, 2019          |
|          |       | Table 4 list of                               | Compliance and Airworthiness Division |                   |
|          |       | approved models.                              | Compitance and An wordings Division   |                   |

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#### STC NO. ST00882DE

#### 2. Introduction

This document is the Federal Aviation Administration (FAA) Approved Model List (AML) for Supplemental Type Certificate (STC) Number ST00882DE, for installing an ADS-B Out system utilizing the Becker Avionics BXT6553 transponders into eligible Part 25 aircraft. Approved models are listed in Section 4.

Revisions to the AML must be coordinated between the STC holder and the responsible Aircraft Certification Office (ACO), and require FAA approval.

This AML is only applicable to the 14 CFR, Part 25 aircraft listed in Section 4. Installations in 14 CFR Part 23, Part 27, and Part 29 aircraft are not authorized under this AML.

### 2.1. Prerequisites

This AML assumes the following equipment is installed on the candidate aircraft via another FAA approval, and is properly linked to satisfy the intended function for the system.

- 1) Transponder system, including
  - a) Standalone transponder, and,
  - b) Technical Standard Order (TSO) Approved transponder antenna which meets the requirements of TSO-C66, TSO-C74, TSO-C112.
- 2) A digital altitude encoder/air data computer that outputs pressure altitude data via the ARINC 429 data protocol.

### 2.2. Specific Limitations

The following limitations apply to this AML STC:

- 1. Installation of the following required equipment is outside the scope of this AML STC. This AML STC does NOT include installation approval of the following equipment:
  - i. air data computers,
  - ii. new or replacement transponder antennas,
  - iii. new or replacement GPS antennas,
  - iv. new or replacement Universal Access Transceiver antenna,
  - v. Weight on Wheels (WoW), squat switch,
  - vi. dual transponder control panel,
  - vii. Traffic Collision Avoidance System (TCAS) II.
- 2. The Becker BXT6553-(000) transponders must be replacing existing transponders.

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- 3. Each BXT6553 transponder must be configured to operate in the diversity mode using dual antennas (upper and lower).
- 4. Only direct connections are permitted between the transponder and the GPS WAAS receiver. GPS WAAS connections utilizing a data concentrator are prohibited.
- 5. This modification is not applicable to aircraft with Electronic Flight Instrument Systems (EFIS) that integrate the transponder with the flight management system or integrated radio-tuning units. When installed by this STC, the transponder must remain federated from any other systems except for interfaces of digitized data.
- 6. This AML STC does NOT allow or provide instructions for interfacing with aircraft traffic advisory systems. FIS-B data, weather and other aeronautical data link products, displayed on a PED via the FreeFlight WiFi Module is for pilot enhanced situational awareness only.
- 7. Approved software/firmware within the units is identified in E-FF-17-0014, *STC Installation Instructions*.
- 8. This AML STC does NOT include the implementation of any 978 MHz Universal Access Transceiver (UAT) ADS-B Out transmit or Traffic Information Service-Broadcast (TIS-B) functionality.
- 9. This AML STC does NOT allow or provide instructions for penetrating the pressure vessel.
- 10. The installation of the replacement BXT6553-(000) transponder systems does NOT affect the airworthiness of the Reduced Vertical Separation Minimums (RVSM) system. The installer should review the RVSM equipment list and determine if the transponder is listed by model number.
- 11. This AML STC does NOT approve or provide instructions for operating in the Enhanced Surveillance (EHS) Mode.
- 12. If the optional WiFi module is installed, a WiFi enable switch must be installed in a location that is accessible by both flight crew members.

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### 3. Certification Basis

The certification basis for each qualified model is specified in the type certificate data sheet (TCDS) and modified by the amendment levels noted in the appendix identified in the approved model list of Section 4.

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# 4. Approved Model List

| Item | Aircraft Make                          | Aircraft Model   | TC<br>Data<br>Sheet | Certification<br>Basis                               | Master Drawing<br>List/Date  | AFM Supplement<br>Number/Date   | Instructions for<br>Continued<br>Airworthiness  | Notes  | Initial<br>Approval /<br>Amendment<br>Date                        |
|------|--|--|---------------------|--|--|---|---|--------|---|
| 1.   | Bombardier,<br>Inc.                    | CL-600-2A12 (CL-601),<br>CL-600-2B16<br>(CL-601-3A Variant),<br>CL-600-2B16<br>(CL-601-3R Variant) | A21EA               | 14 CFR 25 per<br>TCDS as<br>amended by<br>Appendix A | Peregrine Doc. No.<br>E-FF-17-0002,<br>Rev C, dated<br>05/21/19, or later<br>FAA approved<br>revision. | Peregrine Doc. No.<br>E-FF-17-0009,<br>Rev IR, dated<br>5/10/19, or later<br>FAA approved<br>revision | Peregrine Doc. No. E-FF-17-0008, Rev IR, dated 02/08/19, or later FAA approved revision.                | (1)    | Original Issue,<br>05/28/2019                                     |
| 2.   | Dassault<br>Aviation                   | Mystere-Falcon 900   | A46EU               | 14 CFR 25 per<br>TCDS as<br>amended by<br>Appendix A | Peregrine Doc. No. E-FF-17-0002, Rev C, dated 05/21/19, or later FAA approved revision.                | Peregrine Doc. No.<br>E-FF-17-0009,<br>Rev IR, dated<br>5/10/19, or later<br>FAA approved<br>revision | Peregrine Doc. No. E-FF-17-0008, Rev IR, dated 02/08/19, or later FAA approved revision.                | (1)    | Original Issue,<br>05/28/2019                                     |
| 3.   | Gulfstream<br>Aerospace<br>Corporation | G-1159A, G-IV  | A12EA               | 14 CFR 25 per<br>TCDS as<br>amended by<br>Appendix A | Peregrine Doc. No.<br>E-FF-17-0002,<br>Rev C, dated<br>05/21/19, or later<br>FAA approved<br>revision. | Peregrine Doc. No.<br>E-FF-17-0009,<br>Rev IR, dated<br>5/10/19, or later<br>FAA approved<br>revision | Peregrine Doc. No.<br>E-FF-17-0008,<br>Rev IR, dated<br>02/08/19, or later<br>FAA approved<br>revision. | (1)    | Original Issue,<br>05/28/2019                                     |
| 4.   | Gulfstream<br>Aerospace LP             | 1125 Westwind Astra  | A16NM               | 14 CFR 25 per<br>TCDS as<br>amended by<br>Appendix A | Peregrine Doc. No. E-FF-17-0002, Rev E, dated 10/2/19, or later FAA approved revision.                 | Peregrine Doc. No.<br>E-FF-17-0009,<br>Rev IR, dated<br>5/10/19, or later<br>FAA approved<br>revision | Peregrine Doc. No.<br>E-FF-17-0008,<br>Rev IR, dated<br>02/08/19, or later<br>FAA approved<br>revision. | (1)(4) | Amended,<br>November 13,<br>2019                                  |
| 5.   | Learjet Inc.                           | 31, 31A<br>35, 35A, 36, 36A<br>55, 55B, 55C  | A10CE               | 14 CFR 25 per<br>TCDS as<br>amended by<br>Appendix A | Peregrine Doc. No. E-FF-17-0002, Rev C, dated 05/21/19, or later FAA approved revision.                | Peregrine Doc. No.<br>E-FF-17-0009,<br>Rev IR, dated<br>5/10/19, or later<br>FAA approved<br>revision | Peregrine Doc. No. E-FF-17-0008, Rev IR, dated 02/08/19, or later FAA approved revision.                | (1)    | Original Issue,<br>05/28/2019<br>Amended,<br>November 13,<br>2019 |
| 6.   | Textron<br>Aviation Inc.               | BAe.125 Series 800A<br>BAe.125 Series 800B<br>Hawker 800<br>Hawker 800XP                           | A3EU                | 14 CFR 25 per<br>TCDS as<br>amended by<br>Appendix A | Peregrine Doc. No.<br>E-FF-17-0002,<br>Rev C, dated<br>05/21/19, or later<br>FAA approved              | Peregrine Doc. No.<br>E-FF-17-0009,<br>Rev IR, dated<br>5/10/19, or later<br>FAA approved             | Peregrine Doc. No.<br>E-FF-17-0008,<br>Rev IR, dated<br>02/08/19, or later<br>FAA approved              | (1)(2) | Original Issue,<br>05/28/2019                                     |

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| Item | Aircraft Make            | Aircraft Model | TC<br>Data<br>Sheet | Certification<br>Basis                               | Master Drawing<br>List/Date   | AFM Supplement<br>Number/Date   | Instructions for<br>Continued<br>Airworthiness  | Notes  | Initial<br>Approval /<br>Amendment<br>Date |
|------|--------------------------|----------------|---------------------|--|---|---|---|--------|--|
|      |                          |                |                     |  | revision.   | revision  | revision.   |        |  |
| 7.   | Textron<br>Aviation Inc. | 550            | A22CE               | 14 CFR 25 per<br>TCDS as<br>amended by<br>Appendix A | Peregrine Doc. No.<br>E-FF-17-0002,<br>Rev E, dated<br>10/2/19, or later<br>FAA approved<br>revision. | Peregrine Doc. No.<br>E-FF-17-0009,<br>Rev IR, dated<br>5/10/19, or later<br>FAA approved<br>revision | Peregrine Doc. No.<br>E-FF-17-0008,<br>Rev IR, dated<br>02/08/19, or later<br>FAA approved<br>revision. | (1)(3) | Amended,<br>November 13,<br>2019           |
| 8.   | Textron<br>Aviation Inc. | 650            | A9NM                | 14 CFR 25 per<br>TCDS as<br>amended by<br>Appendix A | Peregrine Doc. No. E-FF-17-0002, Rev C, dated 05/21/19, or later FAA approved revision.               | Peregrine Doc. No. E-FF-17-0009, Rev IR, dated 5/10/19, or later FAA approved revision                | Peregrine Doc. No. E-FF-17-0008, Rev IR, dated 02/08/19, or later FAA approved revision.                | (1)(3) | Original Issue,<br>05/28/2019              |

### NOTE(S):

- (1) Eligible serial numbers are those identified as eligible in the type certificate data sheet (TCDS) specified in the TC Data Sheet column of Section 4 of this document for these models.
- (2) Type Certificate Holder Record: Beechcraft Corporation transferred to Textron Aviation Inc. on October 12, 2016.

  Type Certificate Holder Record: Hawker Beechcraft Corporation transferred to Beechcraft Corporation on April 12, 2013.

  Type Certificate Holder Record: Raytheon Aircraft Company transferred to Hawker Beechcraft Corporation on March 26, 2007.
- (3) Type Certificate Holder Record: Cessna Aircraft Company transferred TCDS to Textron Aviation Inc. on June 16, 2015.
- (4) Type Certificate Holder Record: Israel Aircraft Industries, LTD. transferred TCDS to Gulfstream Aerospace LP on March 26, 2002.

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## **Appendix A: All Models**

Based on 14 CFR § 21.115 and 21.101, and the FAA policy for significant changes in FAA Order 8110.48, the certification basis is as follows:

- a. As determined by the Type Certificate Data Sheet (TCDS) of the aircraft for parts **not changed or not affected** by this STC.
- b. Regulations at the amendment levels listed in Table 1 below for parts **changed or affected** by the STC since the reference date of application, January 23, 2015.

**Table 1: Certification Basis Including Amendments** 

| Regulations        | Amdt. |
|--------------------|-------|
| § 25.301           | 25-23 |
| § 25.303           | 25-23 |
| § 25.305           | 25-86 |
| § 25.307           | 25-72 |
| § 25.337           | 25-23 |
| § 25.341           | 25-86 |
| § 25.473           | 25-91 |
| § 25.561 (c)       | 25-91 |
| § 25.601           | 25-0  |
| § 25.603           | 25-46 |
| § 25.605           | 25-46 |
| § 25.607           | 25-23 |
| § 25.609           | 25-0  |
| § 25.611           | 25-23 |
| § 25.613           | 25-72 |
| § 25.619           | 25-23 |
| § 25.625 (a)(b)(c) | 25-72 |
| § 25.671 (a)       | 25-23 |
|                    |       |
|                    |       |

| Regulations            | Amdt.  |
|------------------------|--------|
| § 25.771 (a)           | 25-4   |
| § 25.773 (a)(2)        | 25-72  |
| § 25.777 (a)(b)        | 25-46  |
| § 25.853 (a)           | 25-83  |
| § 25.869 (a)(4)        | 25-72  |
| § 25.1301 (a)(b)(c)(d) | 25-0   |
| § 25.1309 (a)(b)(d)(g) | 25-41  |
| § 25.1316 (b)          | 25-134 |
| § 25.1317 (c)          | 25-122 |
| § 25.1321 (d)(e)       | 25-41  |
| § 25.1322 (d)          | 25-38  |
| § 25.1351 (a)          | 25-72  |
| § 25.1353 (a)          | 25-42  |
| § 25.1357 (a)(b)(c)(d) | 25-0   |
| § 25.1359 (a)(b)(d)    | 25-32  |
| § 25.1431 (a)(b)(c)    | 25-0   |
| § 25.1529              | 25-54  |
| § 25.1555 (a)          | 25-0   |
| § 25.1581              | 25-72  |
| § 25.1583 (c)          | 25-72  |

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