

Approved Model List For

**Automatic Dependent Surveillance - Broadcast (ADS-B) Out System
using the Trig Avionics TT31 Transponder and qualified Global Position
System (GPS)**

Peregrine

STC No. SA00744DE

FAA Approved: _____

Gregory Johnson
Acting Manager, Denver Aircraft Certification Office

Amended: July 31, 2014

FAA APPROVED MODEL LIST
For ADS-B Out Airworthiness Approval
Peregrine
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1. Revision Log

Revision	Pages	Description	FAA Approval	Date
(-)	ALL	Initial Release	<p style="text-align: center;">_____ SIGNED BY: Todd Dixon</p> <p>Manager, Denver Aircraft Certification Office Federal Aviation Administration Transport Airplane Directorate</p> <p>Date: <u> 5/10/12 </u></p>	Original Issue May 10, 2012
A	ALL	Added other Mooney Models (M20B, M20D, M20E, M20F, M20G, M20J, M20K); Added Note (1)	<p style="text-align: center;">_____ SIGNED BY: Todd Dixon</p> <p>Manager, Denver Aircraft Certification Office Federal Aviation Administration Transport Airplane Directorate</p> <p>Date: <u> 9/17/12 </u></p>	Sep 17, 2012
B	ALL	Added Accord NexNav Mini GPS/WAAS Receiver; Added Note (2); Changed "GPS/WAAS Sensor" to "GPS/WAAS Receiver"	<p style="text-align: center;">_____ SIGNED BY: Ronnea Derby</p> <p>Aerospace Engineer, Denver ACO Federal Aviation Administration Transport Airplane Directorate</p> <p>Date: <u> 11/27/2012 </u></p>	Nov 27, 2012
C	4 - 7	Page 4, added section 3. Page 5, updated model list to include other aircraft and reference to Appendix A. Corrected ICA revision for item #3 (was B, is C) Page 7, added Appendix A.	<p style="text-align: center;">_____ SIGNED BY: Todd Dixon</p> <p>Manager, Denver Aircraft Certification Office Federal Aviation Administration Transport Airplane Directorate</p> <p>Date: <u> 03/28/2013 </u></p>	Mar 28, 2013

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D	ALL 3-5	Renumbered pages Added configuration (3) NOTE: This revision contains: Cover page, pages ii-iii, and pages 1-6.	_____ Acting Manager, Denver Aircraft Certification Office Federal Aviation Administration Transport Airplane Directorate Date: _____	Jul 31, 2014
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2. Introduction

This document is the Federal Aviation Administration (FAA) Approved Model List (AML) for Supplemental Type Certificate (STC) Number SA00744DE, for installing the Automatic Dependent Surveillance - Broadcast (ADS-B) Out System using the Trig Avionics TT31 Transponder and qualified Global Position System (GPS) with Wide Area Augmentation System (WAAS) into eligible aircraft.

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

This STC is only applicable to the 14 CFR, Part 23, Class I aircraft, as defined in Advisory Circular (AC) 23.1309-1C, which are listed in this AML. Installations in 14 CFR, Part 23 Class II, III and IV, Part 25, Part 27 and Part 29 aircraft are not authorized under this STC.

This STC assumes the following equipment is already installed on each airplane eligible for this proposed modification. The following equipment must be properly linked to meet the intended function for the system, as certified under this AML approval.

- a. Transponder system, including
 - i. Standalone transponder, and,
 - ii. Technical Standard Order (TSO) Approved transponder antenna that meets TSO-C112.
- b. Altitude encoder.

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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 below.

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4. Approved Model List

Item	Aircraft Make	Aircraft Model	S/N	TC Data Sheet	Certification Basis	Master Drawing List/Date	AFM Supplement Number/Date	Instructions for Continued Airworthiness	Note(s)	AML Amendment / Date
1.	Mooney	M20C	All	2A3	CAR 3. See Appendix A for Details	Peregrine Doc. No. E-TA-11-0002, Rev. A, dated 02/24/12, or later FAA approved revision.	Peregrine Doc. No. E-TA-11-0009, Original Release, April 02, 2012, or later FAA approved revision.	Peregrine Doc. No. E-TA-11-0008, Original Release, 30 Mar 2012, or later FAA approved revision.	(1)	Original Issue May 10, 2012
2.	Mooney	M20B, M20D, M20E, M20F, M20G, M20J, M20K	All	2A3	CAR 3 and 14 CFR 23. See Appendix A for Details	Peregrine Doc. No. E-TA-11-0002, Rev. B, dated 09/10/12, or later FAA approved revision.	Peregrine Doc. No. E-TA-11-0009, Rev. A, dated Sep 13, 2012, or later FAA approved revision	Peregrine Doc. No. E-TA-11-0008, Rev. B, dated 22 August 2012, or later FAA approved revision.	(1)	Revision A Sep 17, 2012
3.	Mooney	M20B, M20C, M20D, M20E, M20F, M20G, M20J, M20K	All	2A3	CAR 3 and 14 CFR 23. See Appendix A for Details	Peregrine Doc. No. E-TA-11-0002, Rev. C, dated 09/18/12, or later FAA approved revision.	Peregrine Doc. No. E-TA-11-0009, Rev. B, dated November 8, 2012, or later FAA approved revision	Peregrine Doc. No. E-TA-11-0008, Rev. C, dated 13 Sep 2012, or later FAA approved revision.	(2)	Revision B Nov 27, 2012
						Peregrine Doc. No. E-TA-11-0002, Rev. K, dated 07/25/14, or later FAA approved revision.	Peregrine Doc. No. E-TA-11-0009, Rev. D, dated 07/23/14, or later FAA approved revision	Peregrine Doc. No. E-TA-11-0008, Rev. E, dated 07/25/14, or later FAA approved revision.	(3)	Revision D Jul 31, 2014
4.	Mooney	M20L, M20M, M20R, M20S	All	2A3	CAR 3 and 14 CFR 23. See Appendix A for Details	Peregrine Doc. No. E-TA-11-0002, Rev. E, dated 02/04/13, or later FAA approved revision.	Peregrine Doc. No. E-TA-11-0009, Rev. C, dated 3-20-2013, or later FAA approved revision	Peregrine Doc. No. E-TA-11-0008, Rev. D, dated 6 Feb 2013, or later FAA approved revision.	(2)	Revision C Mar 28, 2013

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Item	Aircraft Make	Aircraft Model	S/N	TC Data Sheet	Certification Basis	Master Drawing List/Date	AFM Supplement Number/Date	Instructions for Continued Airworthiness	Note(s)	AML Amendment / Date
						Peregrine Doc. No. E-TA-11-0002, Rev. K, dated 07/25/14, or later FAA approved revision.	Peregrine Doc. No. E-TA-11-0009, Rev. D, dated 07/23/14, or later FAA approved revision	Peregrine Doc. No. E-TA-11-0008, Rev. E, dated 07/25/14, or later FAA approved revision.	(3)	Revision D Jul 31, 2014
5	Piper	PA-28-140, PA-28-150, PA-28-151, PA-28-160, PA-28-161, PA-28-180, PA-28-181, PA-28-201T, PA-28-235, PA-28-236, PA-28R-180, PA-28R-200, PA-28R-201, PA-28R-201T, PA-28RT-201, PA-28RT-201T, PA-28S-160, PA-28S-180	All	2A13	CAR 3 and 14 CFR 23. See Appendix A for Details	Peregrine Doc. No. E-TA-11-0002, Rev. E, dated 02/04/13, or later FAA approved revision.	Peregrine Doc. No. E-TA-11-0009, Rev. C, dated 3-20-2013, or later FAA approved revision	Peregrine Doc. No. E-TA-11-0008, Rev. D, dated 6 Feb 2013, or later FAA approved revision.	(2)	Revision C Mar 28, 2013
						Peregrine Doc. No. E-TA-11-0002, Rev. K, dated 07/25/14, or later FAA approved revision.	Peregrine Doc. No. E-TA-11-0009, Rev. D, dated 07/23/14, or later FAA approved revision	Peregrine Doc. No. E-TA-11-0008, Rev. E, dated 07/25/14, or later FAA approved revision.	(3)	Revision D Jul 31, 2014
6	Cessna	172, 172A, 172B, 172C, 172D, 172E, 172F, 172G, 172H, 172I, 172K, 172L, 172M, 172N, 172P, 172Q, 172R, 172S	All	3A12	CAR 3 and 14 CFR 23. See Appendix A for Details	Peregrine Doc. No. E-TA-11-0002, Rev. E, dated 02/04/13, or later FAA approved revision.	Peregrine Doc. No. E-TA-11-0009, Rev. C, dated 3-20-2013, or later FAA approved revision	Peregrine Doc. No. E-TA-11-0008, Rev. D, dated 6 Feb 2013, or later FAA approved revision.	(2)	Revision C Mar 28, 2013
						Peregrine Doc. No. E-TA-11-0002, Rev. K, dated 07/25/14, or later FAA approved revision.	Peregrine Doc. No. E-TA-11-0009, Rev. D, dated 07/23/14, or later FAA approved revision	Peregrine Doc. No. E-TA-11-0008, Rev. E, dated 07/25/14, or later FAA approved revision.	(3)	Revision D Jul 31, 2014

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7	Cessna	182, 182A, 182B, 182C, 182D, 182E, 182F, 182G, 182H, 182J, 182S, 182T, 182K, 182L, 182M, 182N, 182P, 182Q, 182R, R182, T182, TR182, T182T	All	3A13	CAR 3 and 14 CFR 23. See Appendix A for Details	Peregrine Doc. No. E-TA-11-0002, Rev. E, dated 02/04/13, or later FAA approved revision.	Peregrine Doc. No. E-TA-11-0009, Rev. C, dated 3-20-2013, or later FAA approved revision	Peregrine Doc. No. E-TA-11-0008, Rev. D, dated 6 Feb 2013, or later FAA approved revision.	(2)	Revision C Mar 28, 2013
						Peregrine Doc. No. E-TA-11-0002, Rev. K, dated 07/25/14, or later FAA approved revision.	Peregrine Doc. No. E-TA-11-0009, Rev. D, dated 07/23/14, or later FAA approved revision	Peregrine Doc. No. E-TA-11-0008, Rev. E, dated 07/25/14, or later FAA approved revision.	(3)	Revision D Jul 31, 2014

NOTE(S):

- (1) **Configuration 1:** Approved ADS-B Out Equipage for this model is the Trig Avionics TT31 Transponder (software version 3.1 or later) and FreeFlight Systems 1201 GPS/WAAS Receiver (software version 0306 or later).
- (2) **Configuration 2:** Approved ADS-B Out Equipage for this model is the Trig Avionics TT31 Transponder (software version 3.1 or later) and FreeFlight Systems 1201 GPS/WAAS Receiver (software version 0306 or later) or the Accord Technologies NexNav Mini 21000 GPS/WAAS Receiver (software version 1.9 or later).
- (3) **Configuration 3:** Approved ADS-B Out Equipage for this model is the Trig Avionics TT31 Transponder (software version 3.12 or later) and a previously installed Garmin GNS 400W/500W Series GPS/WAAS Receiver (software version 5.0) listed below:

Model Number	Part Number	Description
GPS 400W	011-01057-()	GPS/WAAS functionality only
GNC 420W	011-01058-()	GPS/WAAS & VHF COM (10W)
GNC 420AW	011-01059-()	GPS/WAAS & VHF COM (16W)
GNS 430W	011-01060-()	GPS/WAAS, VHF COM (10W) & VOR, & VHF NAV
GNS 430AW	011-01061-()	GPS/WAAS, VHF COM (16W) & VOR, & VHF NAV
GPS 500W	011-01062-()	GPS/WAAS functionality only
GPS 500W TAWS	011-01063-()	GPS/WAAS with Terrain Awareness & Warning System
GPS 530W	011-01064-()	GPS/WAAS, VHF COM (10W) & VOR, & VHF NAV
GPS 530W TAWS	011-01065-()	GPS/WAAS, VHF COM (10W) & VOR, & VHF NAV with Terrain Awareness & Warning System
GPS 530AW	011-01066-()	GPS/WAAS, VHF COM (16W) & VOR, & VHF NAV
GPS 530AW TAWS	011-01067-()	GPS/WAAS, VHF COM (16W) & VOR, & VHF NAV with Terrain Awareness & Warning System

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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, November 7, 2011.

Table 1: Certification Basis Including Amendments.

Regulations	Amdt.
§ 23.301	23-48
§ 23.303	23-0
§ 23.305	23-45
§ 23.307	23-0
§ 23.321	23-45
§ 23.471	23-0
§ 23.561 (b)(3)	23-48
§ 23.601	23-0
§ 23.603	23-23
§ 23.605	23-23
§ 23.607	23-48
§ 23.609	23-0
§ 23.611	23-48
§ 23.613	23-45
§ 23.619	23-7
§ 23.625	23-7
§ 23.671	23-0
§ 23.771 (a)	23-14
§ 23.773 (a)(2)	23-45
§ 23.777 (a)(b)	23-51
§ 23.1301 (a)(b)(c)(d)	23-20
§ 23.1309 (a)(b)(e)	23-49
§ 23.1322 (d)	23-43
§ 23.1351 (a)(b)(1)	23-49
§ 23.1357 (a)(b)(c)(d)	23-43
§ 23.1359 (a)(c)	23-49
§ 23.1365 (a)(b)(d)(e)	23-49
§ 23.1430 (a)(b)	23-49