

Table of Contents

Part A

	HQ CONTROL DATE	EFFECTIVE DATE	AMENDMENT NUMBER
001 Issuance and Applicability	05/06/2022	09/20/2022	8
002 Definitions and Abbreviations	12/14/2017	07/30/2019	7
003 Ratings and Limitations	04/03/2017	07/30/2019	4
004 Summary of Special Authorizations and Limitations	09/23/1998	01/27/2015	10
007 Designated Persons	09/08/2021	11/15/2022	16
025 Electronic/Digital Recordkeeping System, Electronic/Digital Signature, and Electronic Media	04/03/2017	07/30/2019	1
449 Drug and Alcohol Testing Program	08/30/2021	01/31/2022	1

A001 . Issuance and Applicability

HQ Control: 05/06/2022

HQ Revision: 05f

a. These operations specifications are issued to SHADIN AVIONICS, a Repair Station located in the United States, pursuant to 14 CFR Part 145, § 145.53(a). The repair station certificate holder shall conduct operations in accordance with 14 CFR Part 145 and these operations specifications.

The certificate holder's address:

Fixed Location:
7555 Market Place Drive
Eden Prairie, Minnesota 55344

b. The holder of these operations specifications is the holder of certificate number K5NR335Y and shall hereafter be referred to as the "certificate holder".

c. These operations specifications are issued as part of this repair station certificate and are in effect as of the date approval is effective. This certificate and these operations specifications shall remain in effect until the certificate for a repair station that is located in the United States is surrendered, suspended, or revoked.

d. The repair station specified on these operations specifications performs maintenance and/or an alteration of aircraft and/or aeronautical products under a Bilateral Aviation Safety Agreement (BASA).

e. The certificate holder is authorized to use only the business name which appears on the certificate to conduct the operations described in subparagraph a.

1. Issued by the Federal Aviation Administration.
2. These Operations Specifications are approved by direction of the Administrator.



Digitally signed by Dale E Drenckhahn, Principal Maintenance Inspector (GL15)
[1] EFFECTIVE DATE: 9/20/2022, [2] AMENDMENT #: 8
DATE: 2022.09.20 14:47:01 -05:00

3. I hereby accept and receive the Operations Specifications in this paragraph.

A handwritten signature in blue ink, reading "Thomas Gillespie".

Thomas Gillespie, Quality Manager/FAA Liaison

A handwritten date in blue ink, reading "9/21/2022".

Date

A002 . Definitions and Abbreviations

HQ Control: 12/14/2017

HQ Revision: 05d

Unless otherwise defined in these operations specifications, all words, phrases, definitions, and abbreviations have identical meanings to those used in 14 CFR and 49 U.S.C., as cited in Public Law 103-272, as amended. Additionally, the definitions listed below are applicable to operations conducted in accordance with these operations specifications.

BASA	The Bilateral Aviation Safety Agreement (BASA) is an executive agreement concluded between the United States and a foreign country for the purpose of promoting aviation safety; also known as an Agreement for the Promotion of Aviation Safety.
Certificate Holder	In these operations specifications, the term "certificate holder" means the holder of the repair station certificate described in these operations specifications in Part A paragraph A001 and any of its officers, employees, or agents used in the conduct of operations under this certificate.
CAAS	Civil Aviation Authority of Singapore
CFR	Code of Federal Regulations
Class Rating	As used with respect to the certification, ratings, privileges of airframes, powerplants, propellers, radios, instruments, and accessories within a category having similar operating characteristics.
EASA	European Aviation Safety Agency
EASA Accountable Manager	The manager who has corporate authority for ensuring that all maintenance required by the customer can be financed and carried out to the standard required by the EASA full-member Authority.
EU	European Union
Exemption	An authorization that permits an alternate means of compliance with a specific CFR. The exemption must meet the procedural requirements of 14 CFR Part 11.
FOCA	Federal Office of Civil Aviation
FAA Accountable Manager	A person designated by the certificated repair station who is responsible for and has authority over all repair station operations that are conducted under 14 CFR Part 145, including ensuring that the repair station's personnel follow the regulations and serving as the primary contact with the FAA.

Geographic Authorization	Authorization provided to a repair station located outside the United States to perform maintenance support under contract for a U.S. air carrier (or an operator of U.S.- registered aircraft under 14 CFR Part 129) at a location other than the repair station's main facility. A geographic authorization is issued by the FAA to respond to a U.S. air carrier's or Part 129 foreign operator's need for maintenance at a station where the frequency and scope of that maintenance does not warrant permanently staffing and equipping the station for its accomplishment.
Limited Rating	A rating issued to repair stations for the performance of maintenance on particular makes and models of airframes, powerplants, propellers, radios, instruments, accessories, and/or parts.
Limited Ratings - Specialized Services	Rating issued for a special maintenance function when the function is performed in accordance with a specification approved by the Administrator.
Line Maintenance	Any unscheduled maintenance resulting from unforeseen events, or scheduled checks where certain servicing and/or inspections do not require specialized training, equipment, or facilities.
MAG	The Maintenance Annex Guidance (MAG) defines the process that the FAA and EASA undertake in the inspection, findings of compliance certification, and monitoring of repair stations, as well as their joint cooperation in quality assurance and standardization activities in support of the EASA Agreement, Annex 2, Maintenance. The term Maintenance Agreement Guidance (MAG) defines the processes and activities applicable to a specific country under an MIP, and is not associated with the EASA Agreement.
Maintenance	The inspection, overhaul, repair, preservation, and replacement of parts, but excludes preventive maintenance.
U.S./EU Aviation Safety Agreement, Annex 2, Maintenance	Annex 2 covers the reciprocal acceptance of findings of compliance, approvals, documentation and technical assistance regarding approvals and the monitoring of repair stations/maintenance organizations.
MIP	Maintenance Implementation Procedures (MIP) are procedures for implementing the provisions of a BASA that apply to maintenance performed under 14 CFR Part 145, Section 145.53(b).
MOE	A maintenance organization exposition (MOE) pertains to procedural manuals used by maintenance organizations certificated by a foreign country. The MOE along with the FAA Supplement, sets forth the structure and procedures of the repair station to meet the requirements of 14 CFR Part 145 under a MIP.

Preventive Maintenance	As defined in 14 CFR part 1 and part 43 appendix A, subparagraph (c).
QCM	Quality Control Manual
Repair Station located in the United States	A FAA certificated repair station located in the United States.
Repair Station located outside the United States	A FAA certificated repair station located outside of the United States.
RSM	Repair Station Manual

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Digitally signed by Curt Lundeen, Principal Avionics Inspector (GL15)
[1] EFFECTIVE DATE: 7/30/2019, [2] AMENDMENT #: 7
DATE: 2019.07.30 13:51:29 -05:00

3. I hereby accept and receive the Operations Specifications in this paragraph.

Thomas Gillespie

Thomas Gillespie, Quality Manager/FAA Liaison

8-1-19

Date

A003 . Ratings and Limitations

HQ Control: 04/03/2017

HQ Revision: 01a

The certificate holder is authorized the following Ratings and/or Limitations:

Class Ratings

NONE

Limited Ratings

<u>Rating</u>	<u>Manufacturer</u>	<u>Make/Model</u>	<u>Limitations</u>
Accessories - Electronic	SHADIN AVIONICS	FUEL MANAGEMENT SERIES AIRDATA COMPUTER SERIES ENGINE TREND MONITORING SERIES ARINC FORMAT CONVERTER SERIES ALTITUDE MANAGEMENT SERIES ALTITUDE ENCODER SERIES	INSTALLATION NOT AUTHORIZED

Limited Ratings - Specialized Services

<u>Rating</u>	<u>Specifications</u>	<u>Limitations</u>
None Authorized.		

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Digitally signed by Curt Lundeen, Principal Avionics Inspector (GL15)
[1] EFFECTIVE DATE: 7/30/2019, [2] AMENDMENT #: 4
DATE: 2019.07.30 13:52:53 -05:00

3. I hereby accept and receive the Operations Specifications in this paragraph.

Thomas Gillespie

8-1-19

Thomas Gillespie, Quality Manager/FAA Liaison

Date

A004 . Summary of Special Authorizations and Limitations

HQ Control: 09/23/1998

HQ Revision: 010

a. The certificate holder, in accordance with the reference paragraphs, is authorized to:

	Reference Paragraphs
Use an approved electronic recordkeeping system, electronic/digital signature, and/or electronic media.	A025
Conduct operations choosing to have an antidrug and alcohol misuse prevention program.	A449

b. The certificate holder is *not authorized* and *shall not*:

	Reference Paragraphs
Use Exemptions.	A005
Perform maintenance with NAA ratings where the scope of work is authorized by a BASA/MIP.	A060
Perform work, including continuous operations, at additional locations other than at its primary fixed location.	A101
Conduct operations choosing to have an antidrug and alcohol misuse prevention program.	A449
Perform maintenance in accordance with foreign repair station geographic authorizations.	B050
Perform work, excluding continuous operations, at additional locations other than at its primary Fixed Location.	D100
Perform line maintenance for cert. holders conducting operations under Parts 121 and 135 and for foreign carriers/persons operating U.S. registered aircraft in common carriage under Part 129, apart from D100 which authorizes that work away from station.	D107

1. Issued by the Federal Aviation Administration.
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Digitally signed by Curt Lundeen, Principal Avionics Inspector (GL15)
[1] EFFECTIVE DATE: 1/27/2015, [2] AMENDMENT #: 10
DATE: 2015.01.27 12:51:26 -06:00

3. I hereby accept and receive the Operations Specifications in this paragraph.

Thomas Gillespie

8-1-19

Gillespie, Thomas, Quality Manager/FAA Liaison

Date

A007 . Designated Persons

HQ Control: 09/08/2021

HQ Revision: 03a

a. The personnel listed in the following table are designated to officially apply for and receive operations specifications for the certificate holder indicated below.

Table 1 – Designated Persons to Apply for and Receive Authorizations

Title	Name	Parts Authorized	Email Address
FAA Accountable Manager, 145	Peterson, Michael	A,D	michael.peterson@shadin.com
Quality Manager/FAA Liaison	Gillespie, Thomas	A	tom.gillespie@shadin.com
EASA Accountable Manager, 145	Ingram, Michael	A,D	michael.ingram@shadin.com

b. The following personnel listed in Table 2 are designated by the certificate holder to receive Information for Operators (InFO) messages for the certificate holder as indicated below. A receipt for the information by an operator or person is not required.

Table 2 – Designated to Receive InFO Messages

Name	Email Address	Telephone No.	Type of Information to Receive
Michael Peterson	michael.peterson@shadin.com	952-927-6500	ALL
Thomas Gillespie	tom.gillespie@shadin.com	952-927-6500	ALL

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Digitally signed by Charles J. Keller, Principal Avionics Inspector (GL15)
[1] EFFECTIVE DATE: 11/15/2022, [2] AMENDMENT #: 16
DATE: 2022.11.15 10:55:19 -06:00

3. I hereby accept and receive the Operations Specifications in this paragraph.

A blue ink signature of Michael Peterson, written over a horizontal line.

Michael Peterson, FAA Accountable Manager, 145 Date

18/Nov/2022

**A025 . Electronic/Digital Recordkeeping System,
Electronic/Digital Signature, and Electronic Media**

HQ Control: 04/03/2017

HQ Revision: 00b

a. The certificate holder is authorized to use an acceptable electronic/digital recordkeeping system, described and/or referenced in this paragraph (if none, enter N/A.)

NA

b. The certificate holder is authorized the use of the following electronic/digital signature procedures (if none, enter "N/A").

NA

c. The certificate holder is authorized to use electronic media for the repair station and quality control manuals, if acceptable (if none, enter "N/A").

Electronic copy of the Repair Station and Quality Control Manual in accordance with the Shadin Avionics Quality Control Manual

1. Issued by the Federal Aviation Administration.

2. These Operations Specifications are approved by direction of the Administrator.



Digitally signed by Curt Lundeen, Principal Avionics Inspector (GL15)

[1] EFFECTIVE DATE: 7/30/2019, [2] AMENDMENT #: 1

DATE: 2019.07.30 13:54:24 -05:00

3. I hereby accept and receive the Operations Specifications in this paragraph.

Thomas Gillespie

8-1-19

Thomas Gillespie, Quality Manager/FAA Liaison

Date

A449 . Drug and Alcohol Testing Program

HQ Control: 08/30/2021

HQ Revision: 00b

- a. The 14 CFR Part 145 repair station certificate holder has implemented a drug and alcohol testing program because the certificate holder performs safety-sensitive functions for a 14 CFR Part 121, 121/135, and/or 135 certificate holder, and/or for a 14 CFR Part 91 operator conducting operations under § 91.147.
- b. The certificate holder certifies that it will comply with the requirements of 14 CFR Part 120 and 49 CFR Part 40 for its drug and alcohol testing program.
- c. Drug and alcohol testing program records are maintained and available for inspection by the FAA's Drug Abatement Compliance and Enforcement Inspectors at the location listed in Table 1 below:

Table 1

Location & Telephone of Drug and Alcohol Testing Program Records	
Telephone Number:	A1 952-927-6500
Address:	7555 Market Place Drive
Address:	
City:	Eden Prairie
State:	MN
Zip code:	55344

d. Limitations and Provisions.

(1) The FAA's Drug Abatement Division is responsible for oversight and enforcement of the DOT/FAA-mandated drug and alcohol testing program. Questions regarding the program requirements or regulations must be directed to the Drug Abatement Division at 202-267-8442 or drugabatement@faa.gov.

(2) The certificate holder is responsible for updating this operations specification when any of the following changes occur:

(a) Phone number and address where the drug and alcohol testing program records are kept.

(b) If the certificate holder's number of safety-sensitive employees goes to 50 and above, or falls below 50 safety-sensitive employees.

(3) The certificate holder with 50 or more employees performing a safety-sensitive function on January 1 of the calendar year must submit an annual report to the Drug Abatement Division of the FAA.

(4) The certificate holder with fewer than 50 employees performing a safety-sensitive function

on January 1 of any calendar year must submit an annual report upon request of the Administrator.

- e. The certificate holder has fewer than 50 safety-sensitive employees.

1. Issued by the Federal Aviation Administration.
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Digitally signed by Dale E Drenckhahn, Principal Maintenance Inspector (GL15)
[1] EFFECTIVE DATE: 1/31/2022, [2] AMENDMENT #: 1
DATE: 2022.01.31 10:41:47 -06:00

3. I hereby accept and receive the Operations Specifications in this paragraph.

A handwritten signature in blue ink, appearing to read "Michael Peterson", written over a horizontal line.

Michael Peterson, FAA Accountable Manager, 145 Date

Feb 02, 2022