

Avtech Services LLC

REPAIR STATION TRAINING PROGRAM MANUAL

Avtech Services LLC
CRS:7AYR463B

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Skypark Airport
Woods Cross, Utah 84087

Table of Contents

Revision Record.....	3
List of Effective Pages	4
Chapter 1: Introduction	5
Chapter 2: Manual Revision and Notifying the CHDO	6
Chapter 3: Training Needs Assessment (TNA)	7
Chapter 4: Initial Training	9
Chapter 5: Recurrent Training	11
Chapter 6: Remedial Training.....	12
Chapter 7: Course Determination for Initial and Recurrent Training	13
Chapter 8: Training Records	14
Chapter 9: Work Performed for an Operator under 14 CFR Parts 121, 125, 129, or 135	15
Chapter 10: Work Performed by Interim Maintenance Employees.....	16
Chapter 11: Qualification for Non-Certificated Person	17
Chapter 12: Evaluating and Qualifying Instructors	18
Chapter 13: Inspectors	19
APPENDIX.....	20
Form AS-801, Required Reading for Record.....	21
Form AS-802, Record of Practical Training (On-the-Job Training (OJT)).....	22
Form AS-803, Record of Classroom Training	23
Form AS-804, Employee Training Needs Assessment.....	24
Form AS-805, Repair Station Training Needs Assessment	25

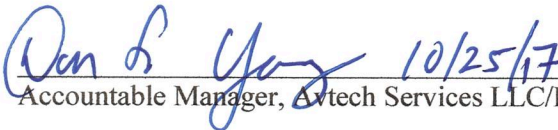
NOTE: Effective date indicates when the revised manual (pdf format only) is entered into Avtech Services LLC mainframe digital library.

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List of Effective Pages

Page Number	Date	Page Number	Date	Page Number	Date
1	05/10/2017	14	05/10/2017		
2	05/10/2017	15	05/10/2017		
3	05/10/2017	16	05/10/2017		
4	05/10/2017	17	05/10/2017		
5	05/10/2017	18	05/10/2017		
6	05/10/2017	19	05/10/2017		
7	05/10/2017	20	05/10/2017		
8	05/10/2017	21	05/10/2017		
9	05/10/2017	22	05/10/2017		
10	05/10/2017	23	05/10/2017		
11	05/10/2017	24	05/10/2017		
12	05/10/2017	25	05/10/2017		
13	05/10/2017				

This manual has been reviewed and accepted by:


Accountable Manager, Avtech Services LLC/Date

 10/25/17
FAA CHDO Approval/Date

Chapter 1: Introduction

1. This training program **manual** contains the policies and procedures Avtech Services LLC uses to determine its training requirements and develop its FAA approved training program. **The training program ensures each repair station employee has the knowledge and skills to capably perform assigned maintenance (including inspection), preventative maintenance, and alteration tasks. The training program content in this manual ensures Avtech Services LLC can respond to its employees' changing training needs.**
2. This program **manual sets forth** the procedures for Avtech Services LLC to identify an employee's training needs in a systematic manner, develop training and/or identify appropriate existing training, select the training methods, provide training and record training accomplished.
3. Avtech Services LLC controls this document in accordance with the procedures for document and revision control described in its **Repair Station and Quality Control Manual (RSM/QCM)**. A copy of this document and all revisions are provided to Avtech Services LLC's certificate-holding district office (CHDO).
4. Avtech Services LLC training program consists of the following basic components:
 - a. Assessment of training needs, to identify overall training needs **for the repair station** and individual employee training needs;
 - b. **Defining areas of study and/or courses/lessons made available to employees;**
 - c. Identification of training sources and methods to identify options and select how Avtech Services LLC will provide the training;
 - d. Documentation of training to ensure all employees' training and qualifications are documented, and records are retained.
5. **The FAA Accountable Manager (AM) is responsible for the Avtech Services training program and is responsible for ensuring Avtech Services LLC complies with all of the components of its training program.**
6. Avtech Services LLC has an established training program that includes indoctrination (initial and recurrent), specialized, and remedial training for employees performing maintenance (including inspection), preventive maintenance **and** alteration tasks. The procedures in this manual enable Avtech Services LLC to revise its existing training program to ensure it meets Avtech Services LLC needs and produces training consistent with all regulatory requirements.
7. All of the information pertaining to the current training records is available for review by the **FAA Principal Inspectors** at Avtech Services LLC's facility.

Chapter 2: Manual Revision and Notifying the CHDO

The process for submitting changes to the training program manual for FAA approval is described in the Avtech Services LLC's RSM/QCM.

Chapter 3: Training Needs Assessment (TNA)

1. Avtech Services LLC **Training** Needs Assessment is a two-part process that includes determining the overall **Repair Station Training Needs** as well as **Individual Training Needs**. The AM reviews all training requirements and the requirements of specific individuals in relation to specific tasks to be performed. When conducting a TNA, Avtech Services LLC will place special emphasis on an individual's ability to read, write, and understand the English language, as required by 14 CFR. All documents and records related to employee training must be in English. Training assessments will be documented on Avtech Services LLC Form AS-804, Employee Training Needs Assessment, and Form AS-805, Repair Station Training Needs Assessment. **Examples of Forms AS-804 and AS-805 are found at the end of this manual in the Appendix.**
2. Repair Station Training Needs Assessment
 - a. To determine its overall training requirements, Avtech Services LLC will review the types of work being performed **or** planned, and identify and update the types of knowledge and skills **required**. This will include reviewing such items as the Avtech Services LLC operations specifications (OpSpecs); customer requirements; **determining the** expected scope of work; and **assessing** the relevant experience of each technician that will be assigned to perform maintenance, preventive maintenance, or alteration tasks.
 - b. The **Repair Station Training** Needs Assessment will result in a description of the knowledge and skills employees must have to properly perform the tasks associated with the work **scope**. The results are recorded in a brief summary report on **Form AS-805, Block A**, which establishes the type and level of training required. **Form AS-805 is also used to record initial indoctrination training on** company procedures for new employees, or initial training for a new type of equipment. Avtech Services LLC will maintain an appropriate level of recurrent training for the different responsibilities of the technical and support personnel. These training **requirements** are documented in **Forms AS-801, AS-802, AS-803, AS-804 and AS-805 by the AM. Training documentation will be maintained in accordance with the procedure described in Chapter 8 of this Training Manual.**
3. **Identification of Training Needs.**
 - a. Avtech Services LLC **will identify training needs and** provide training to employees:
 - 1) When individual employee knowledge or skill deficiencies are identified;
 - 2) When significant changes are made to work scope, or such changes are planned such that the knowledge, skills, or experience render the employee unable to perform work properly, such as;
 - (a) New regulatory requirements are introduced.
 - (b) New tools, equipment, or skills are required to perform the work properly.
 - (c) Work is going to be performed for an air carrier or commercial operator under **14 CFR** Parts 121, 125, 129, or 135.
 - b. Avtech Services LLC may identify individual capability deficiencies through:
 - 1) FAA or other external agency oversight findings.
 - 2) **Internal audits** or investigations that lead to voluntary disclosures.

- 3) Voluntary disclosures and/or feedback from employees.
 - 4) The results from audits related to maintenance human factors.
4. The **AM** ensures the preceding programs are regularly reviewed to determine if any training deficiencies exist. The **AM** will decide on the appropriate training after consulting with all of the technical staff. The **AM** will also be responsible for ensuring that the work performed by the individual requiring additional training will not affect the quality of Avtech Services LLC work until the required training is successfully completed. This can be accomplished through additional supervision or by changing work assignment.
5. **Changes to Avtech Services LLC Workslope.**
- a. Whenever Avtech Services LLC is planning to change its facilities, equipment, or scope of work as reflected in its OpSpecs, the **AM** must ensure the employees are capable of performing the maintenance (including inspection), preventive maintenance, or alteration tasks or that training needs have been identified and met.
6. Individual Needs Assessment
- a. Whenever Avtech Services LLC hires a new employee or transfers an employee to a new task assignment, an assessment of the individual's skill level and qualifications will be documented on Form AS-804, Employee Training Needs Assessment. Avtech Services LLC may accept previous employer training records or certifications, use a formal written examination, an on-the-job assessment, or other appropriate means to determine if any training is required to perform assigned tasks.

Chapter 4: Initial Training

1. Indoctrination Training: Newly hired personnel will receive indoctrination in the following subjects:
 - a. 14 CFR 43
 - b. 14 CFR 145
 - c. Avtech Services LLC Repair Station and Quality Control Manual
 - d. Hazardous materials
 - e. Use of printed and computer resources
 - f. Hangar safety and safety around aircraft
 - g. Runway incursion prevention
 - h. **Maintenance Human Factors. Personnel must understand the importance of human factors. As described in the FAA's Operator's Manual: Human Factors in Aviation Maintenance, dated September 2014, human factors is, "...a science that pays attention to physical, psychological, and other human attributes to ensure that we work safely and efficiently with minimal risk to others and equipment." Avtech Services LLC will include the following subjects in its discussion of human factors:**
 - 1) **General/introduction to human factors,**
 - 2) **Human error,**
 - 3) **Types of errors in maintenance tasks,**
 - 4) **Human reliability,**
 - 5) **Vision,**
 - 6) **Situational awareness, and**
 - 7) **Stress**
2. Initial Technical Training: All newly hired personnel will receive initial technical training in the following areas:
 - a. Use of test panels, valve control, setup for testing altimeters
 - b. Use and care of portable air data test equipment
 - c. Use and care of portable transponder test equipment
3. Defining Acceptable Training
 - a. Course Definition: The AM (or technical staff delegated by the AM) will outline training requirements for the company and/or for the individual, based on the results of a training needs assessment. While defining the course or lesson, the following information should be documented, as appropriate:
 - b. Objectives and/or required performance outcome--define the knowledge or skill obtained or to be obtained from the course or lesson
 - c. Prerequisites--define any knowledge, skill, course, or lesson that needs to be known before the course or lesson can be given
 - d. Training sources--define any and all training sources available to the repair station for the course or lesson
 - e. Training methods--define any and all training methods that can be, will be, or were used to impart the information

- f. Instructor qualifications--define the knowledge or skill level of the in- house instructor or the qualifications of the instructor that provided the information (if known)
 - g. Other supporting information, such as instructor guides, course material, tools, equipment, or any other aid or information provided during the instruction
- 4. Documentation associated with any training accepted or given by the repair station shall be recorded and retained by the AM in the training program files or in the file of the individual employee assigned to perform maintenance (including inspection), preventive maintenance, or alterations under the Repair Station's 14 CFR part 145 Repair Station Certificate. Training will be provided on an initial and recurrent basis as required to ensure all employees performing maintenance (including inspection), preventive maintenance, and alteration tasks are capable of performing assignments.
 - a. Ongoing training: As maintenance functions are performed by each repairman or inspector, the following materials will be read, reviewed and consulted. This study of data will be documented on Avtech Services LLC Form AS-801, Required Reading for Record. The technical material and data which may be consulted and documented is not limited to this list.
 - 1) 14 CFR 43, "Maintenance, Preventive Maintenance, Rebuilding, and Alteration"
 - 2) 14 CFR 43, Appendix E, "Altimeter System Test and Inspection"
 - 3) 14 CFR 43, Appendix F, "ATC Transponder Tests and Inspections"
 - 4) 14 CFR 145, "Repair Stations"
 - 5) AC 43-2B, "Minimum Barometry for Calibration and Test of Atmospheric Pressure Instruments"
 - 6) AC 43-6B, "Altitude Reporting Equipment and Transponder System Maintenance and Inspection Practices"
 - 7) AC 43-15, "Recommended Guidelines for Instrument Shops"
 - b. Whenever possible, seminars hosted by the FAA which pertain to the functions of this Repair Station will be attended.
 - 1) The attendee of such seminars will conduct a training session with the other employees at the earliest convenient time possible to disseminate the knowledge gained.
 - 2) The training conducted will be documented by AM on Form AS-803, Record of Classroom Training.
 - c. Original Equipment Manufacturer (OEM) factory training will be attended if available, pertinent, and approved by the AM.
 - 1) The attendee of such training will conduct a training session with the other employees at the earliest convenient time possible to disseminate the knowledge gained.
 - 2) The training conducted will be documented by AM on Form AS-803, Record of Classroom Training.

Chapter 5: Recurrent Training

1. **Recurrent Training, conducted annually**, will consist of the same training as initial and it will be the employee's responsibility to read and initial on the Form AS-801, as an indication that the material was read and understood.
2. **Avtech Services LLC** employees **will** require training on the content of **all** revisions, to this manual and the RSM/QCM, if a standard operating procedure or inspection-procedure is changed.
3. **Recurrent training will also include a review of maintenance human factors, as described in Chapter 4.**

Chapter 6: Remedial Training

1. Remedial training will be administrated **by the AM** for employees having performance issues.
2. The procedures for remedial training will be the same as initial, except the techniques will vary to provide a greater understanding of material. Repair station employees will be required to demonstrate knowledge and skills **to** an approval to return to service standard prior to returning to work on customers work orders. **These individuals are identified in the RSM/QCM Form AS-201 by the AM.**
3. Employees training records will reflect areas where remedial training was used to meet acceptable standards. This information will be used in the training needs assessment for the employee's future training.

Chapter 7: Course Determination for Initial and Recurrent Training

1. Avtech Services LLC will use all training sources and methods available to provide employees with the information necessary for them to perform assigned maintenance (including inspection), preventive maintenance, and alterations tasks correctly. The majority of the training provided by this repair station will use on-the-job (OJT) methodology. On the job will be the preferred method of training.
 - a. The **AM** must maintain a high level of knowledge and skills to provide proper supervision of all repair station functions.
 - 1) Repair Station employees will receive training any time a process or procedure is changed.
 - b. Each person performing maintenance or alterations of aviation products will be trained on the Repair Station/Quality Control Manuals.
 - c. The Applicable Federal Aviation Regulations (FAR) for the performance of assigned tasks.
 - 1) Manufacturer's instructions for the task to be performed.
 - 2) Applicable Airworthiness Directives
 - 3) Appropriate methods for test and appropriately approval for return to services documents.
 - 4) Any issue relating to safety of others and self.
 - 5) Compliance with Hazardous materials rules.
 - 6) Any other subject deemed necessary by the **AM**, i.e. Hazmat shipping, or other industry regulations.
2. Reading
 - a. Reading can be a good method of training. When reading is determined to be the method of training, the trainee will complete Form AS-801, Required Reading for Record. This form will document that the material has been read and the employee acknowledges that the material was understood and that opportunity was given to ask questions.
3. Practical, "Hands-on" (OJT)
 - a. If training is by verbal and hands-on demonstration, the trainee will complete Form AS-802, Record of Practical Training. This form will document the methods and techniques demonstrated as well as the subjects covered. The instructor shall make the determination if the trainee has demonstrated sufficient skill and knowledge of the subject.
4. Formal Classroom
 - a. If training by lecturing is the most convenient method, it must be documented. Form AS-803, Record of Classroom Training will be completed by the instructor. This form will document the subject taught as well as those who were in attendance.
5. Seminars will be attended, provided the content is applicable to the tasks assigned or for development.

Chapter 8: Training Records

1. The **AM is responsible for and** will ensure training records are generated and maintained for all Avtech Services LLC employees. **These records are intended to** establish **an** individual's **qualification to** perform the maintenance (including inspection), preventative maintenance, and alteration tasks assigned. The records include FAA certifications, other applicable certifications and degrees, Avtech Services LLC or customer qualifications and authorizations, and for each course completed, the total time credited, the date, the instructor, the location, and the results of any associated examination. In addition, the employee training records will contain completed training Forms AS-801, AS-802, or AS-803, **AS-804 and AS-805 as appropriate.**
2. Training records will be kept for the duration of the employee's employment plus an additional two years thereafter.
 - a. The employee's training records will be kept confidential except as required by the FAA or the National Transportation Safety Board (NTSB) in the conduct of their responsibilities.
 - b. Any employee may review their **personal** training records to verify that they are complete and current. If an employee notes a discrepancy in the training record documentation, that employee will inform the **AM** of the discrepancy. Any change to update an employee's training record must be approved by the **AM.**

Chapter 9: Work Performed for an Operator under 14 CFR Parts 121, 125, 129, or 135

1. Avtech Services LL performs work for Parts 121, 125, 129 and 135 operators. Individual operator training requirements (initial, recurrent, or specialized) must be identified for each maintenance task to be performed. Before Avtech Services LLC performs maintenance (including inspection), preventive maintenance, or alteration under its 14 CFR Part 145 Certificate for an air carrier, commercial operator, or on aircraft being maintained under a Continuous Aircraft Maintenance Program (CAMP), a training needs assessment will be conducted to ensure compliance with that operator's requirements.
2. The AM will work with each Operator to schedule Avtech Services LLC employees for operator training, as determined during the Individual Needs Assessment.

Chapter 10: Work Performed by Interim Maintenance Employees

1. During periods of heavy workload, Avtech Services LLC may supplement its workforce with interim maintenance employees. Before these individuals begin work for Avtech Services LLC, they must undergo a needs assessment. The AM will conduct a needs assessment and ensure all individuals are provided training appropriate to the particular assignment before they are allowed to begin work.
 - a. The AM will create training records for all individuals performing maintenance (including inspection), preventative maintenance, and alteration tasks in accordance with established Avtech Services LLC procedures.
 - b. Avtech Services LLC must retain these records for two years upon the departure of the interim employee.
 - c. Interim maintenance employees not certificated under 14 CFR Part 65 as a mechanic must be supervised by a 7AYR employee who is certificated under Part 65.

Chapter 11: Qualification for Non-Certificated Person

1. Non-certificated persons must be evaluated in accordance with the **Individual** Training Needs Assessment Program and trained as necessary.
 - a. The **maintenance** functions performed by the non-certificated person must not be functions that require a certificated person to perform, **they must be under the immediate supervision of a person certified under 14 CFR Part 65 and authorized to perform the functions being performed.**
 - b. **When 7AYR** has trained **non-certificated employees** for the appropriate time frame, they may recommend these persons for a repairman certificate in accordance with **Part 145 and 65 of the 14 CFR.**

Chapter 12: Evaluating and Qualifying Instructors

1. Instructors shall be qualified based upon subject matter knowledge and teaching ability. Subject matter expertise may be established by experience, demonstrated knowledge, and/or certification. The ability to impart information can be determined by observation, demonstration, or experience. Evaluation and selection of Instructors is the responsibility of the AM.

Chapter 13: Inspectors

1. Inspectors are appointed by the AM.
2. The AM will ensure that inspectors under the Avtech Services LLC certificate and operations specifications are:
 - a. Thoroughly familiar with the applicable regulations in 14 CFR 43 and 145 including inspection methods, techniques, practices, aids, equipment, and tools used to determine the airworthiness of the article on which maintenance, preventive maintenance, or alterations are being performed; and
 - b. Proficient in using various types of inspection equipment and visual inspection aids appropriate for the article being inspected.
 - c. Able to understand, read, and write English.
3. The AM will review inspection procedures and processes annually and document the review in the AM's training records.

APPENDIX

Avtech Services LLC	<u>REQUIRED READING FOR RECORD</u>
<p>Date Completed: ____ / ____ / ____ Employee: _____</p> <p>Title of Material Read: _____</p> <p>Subject: _____</p> <p>Give a brief synopsis: _____</p> <p>_____</p> <p>_____</p> <p>_____</p>	
<p>Comments/questions, if any:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>I have read the material described above and do, to the best of my ability, understand and comprehend it. I am prepared to apply the information as I perform my job functions.</p> <p>Signature of Employee: _____</p> <p>Employee #: _____ Date: ____ / ____ / ____</p>	

Avtech Services LLC	<u>RECORD OF PRACTICAL TRAINING</u> <u>(On-the-Job Training (OJT))</u>
<p>Comments, if any:</p> <hr/> <hr/> <hr/> <hr/> <hr/>	
<p>I have participated in the practical training described above and do, to the best of my ability, understand and comprehend the skills learned. I am prepared to apply the information as I perform my job functions.</p> <p>Signature of Employee: _____</p> <p>Employee #: _____ Date: ____ / ____ / ____</p>	
<p>The person described above has been given opportunity to review the material and to ask questions of the trainer.</p> <p>Signature of Trainer: _____ Employee #: _____</p>	

Avtech Services LLC		<u>RECORD OF CLASSROOM TRAINING</u>	
Date of Class: / /			
Give a brief synopsis of subject and learning objectives:			
Roster—Employee Name		Employee #	Initials

Avtech Services LLC	<u>EMPLOYEE TRAINING NEEDS</u> <u>ASSESSMENT</u>
	Check if new employee: _____ If checked, complete blocks A and B, otherwise go to Block C
A. <u>Indoctrination Training Completed:</u> 1. 14 CFR 43 AS-801 Date: 2. 14 CFR 145 AS-801 Date: 3. Avtech Services LLC RSM/QCM AS-801 Date: 4. Hazardous Materials AS-801 Date: 5. Use of Computer & Printed Resources AS-802 Date: 6. Hangar Safety & Safety Around Aircraft AS-802 Date: 7. Runway Incursion Prevention AS-802 Date: 8. Maintenance Human Factors AS-801 Date:	
B. <u>Initial Technical Training Completed:</u> 1. Maintenance Practices AS-801 Date: AS-802 Date: 2. Use and care of test equipment AS-802 Date:	
C. <u>Additional Training or Rating Required:</u> Explain the nature of the additional training or rating required and the basis for this determination: _____ _____ _____ _____ What type of additional training is required and how and by whom will it be administered. _____ _____ _____ The above assessment was concluded by me after consultation with the chief inspector to determine if all required training needs were addressed for the requirements determined: Signature of AM _____	

Avtech Services LLC Date Completed: / /	<u>REPAIR STATION TRAINING NEEDS</u> <u>ASSESSMENT</u>
A. <u>Justification of Requirement</u> Describe the nature of the requirement. Is it associated with a change in capabilities? Will it change the RSM/QCM or OpSpecs? Is the requirement requested by the FAA due to their findings? If so, how will the FAA be notified when the training is completed? 	
B. <u>Effecting the Training:</u> Describe the type of training which will be required. Who will be required to receive the training? Who will administer the training? What method of training will be employed? Is recurrency required? 	
The above assessment was concluded by me after consultation with the chief inspector to determine if all required training needs were addressed for the requirements determined: Signature of AM: _____	