

AC NO: 145-2

DATE: 4/21/76



ADVISORY CIRCULAR

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

SUBJECT: REPAIR STATION LIMITED RATINGS BEECH 18 SERIES AIRCRAFT

1. PURPOSE. The purpose of this advisory circular is to advise of a required limited repair station rating to perform X-ray inspection of the Beech 18 Aircraft Wing and Center Section Spar, and the procedures for application. It also provides information concerning certification procedures and operating requirements.
2. REFERENCES. FAR 145, 65, and Airworthiness Directive (AD) 75-27-09
3. BACKGROUND. Findings of compliance with previous X-ray inspection ADs, (AD-72-20-5, 73-18-4, and 75-09-18), have shown substandard performance. In many instances X-ray plates were made, interpreted, and given to the owner or operator with the assurance that the aircraft was airworthy. However, when the plates were evaluated by FAA engineering personnel, or by Beech Aircraft Corporation, the plates showed that cracks existed, or were suspected, or the quality of the plates was such that a satisfactory interpretation could not be made.
4. NEW AIRWORTHINESS DIRECTIVE. A new AD, 75-27-09, has been published to correct the situation described above. It cancels the previous ADs on this subject and combines all the provisions in one AD. In view of past experience and due to the unique and special inspection procedures described in the directive, it has been determined that only fully qualified facilities and personnel can adequately accomplish the inspections. Accordingly, after July 1, 1976, the only maintenance entity that will be authorized to accomplish the X-ray inspections will be an FAA certificated repair station rated as, "Limited Airframe - Beech 18 Series Aircraft - Wing and Center Section Spar X-ray Inspections." It should be pointed out, however, that the X-ray inspection is only one part of the total compliance with the AD. In addition, a visual inspection and either a magnetic particle or penetrant inspection are required. The latter two can be performed and approved for return to service by a properly qualified airframe mechanic or an appropriately rated repair station.

Initiated by: AFS-830

5. PRE-APPLICATION ASSISTANCE. An applicant for this rating should contact the district office having jurisdiction over the area where the repair station has its main base of operation. Early notification and discussions with the district office should enable the applicant to obtain the rating with a minimum of difficulty and delay.
6. APPLICATION. FAA Form 8310-3, Application for Repair Station Certification and/or Rating, is used to apply for this rating. (See Appendix 1). The applicant completes items 1 through 5. The following information should prove helpful in selecting the proper method of listing the repair station:

Item 1A: Official Name of Station

An Individual

Joe J. Doe d/b/a
Daro Aviation Service

A Corporation

Daro Aviation Service, Inc.
or
Daro Aviation Inc. d/b/a
Daro Aviation Services

A Partnership

John J. Doe, Allen B. Smith
Richard Roe d/b/a
Daro Aviation Service

Item 3: Rating Applied For

See Appendix 1

Item 4: List of Maintenance Functions Contracted to Outside Agencies

Since this is a limited rating to perform a unique and special inspection, special equipment and materials to perform the work are necessary. The word "none" should be entered in item 4.

7. PERSONNEL AND AIR AGENCY QUALIFICATIONS. FAR Section 145.39 requires that a repair station provide adequate personnel who can perform, supervise, and inspect the work for which the station is rated. Therefore, only those agencies and persons who have demonstrated the capability to reliably perform the inspections set forth in AD 75-27-09 can be authorized to perform these inspections. The applicant is expected to show the ability to satisfactorily perform the required X-ray procedures. This may be accomplished by presentation of acceptable X-ray films taken per AD 75-27-09 or an AD superseded by AD 75-27-09. To determine the capabilities of personnel, the FAA will provide a set of test X-rays plates for the person to read and interpret using the applicant's viewers and facilities. This person may be a certificated mechanic holding an

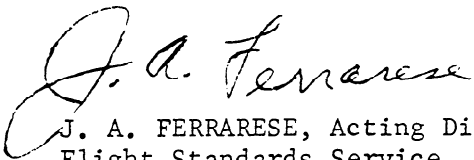
airframe rating or a person who is eligible for a repairman certificate in accordance with the requirements of FAR 65.101 .

8. INSPECTION SYSTEMS. This is one of the most important parts of a repair station. The applicant and the FAA District Office should work closely to see that a system is developed that produces satisfactory quality control and complies with FAR 145.45. This is particularly important in the case of X-ray inspections, since there are so many variables, and past experiences have shown a problem in this area. The applicant for this rating should prepare an inspection procedures manual that contains instructions and procedures for inspection personnel to be thoroughly familiar with all X-ray inspection methods, techniques, and equipment. They should also have available, understand, and comply with the current specifications contained in the operations specification of the station.
9. INSPECTION FOR CERTIFICATION. An applicant should contact the FAA District Office, giving as much lead time as possible to allow for scheduling of inspections. This should be accomplished when the applicant believes that the applicable requirements of FAR 145 have been satisfied.
 - a. The applicant should present with the application, or as soon as possible thereafter, a set of X-ray films taken by him in accordance with AD 75-27-09 or an AD superseded by AD 75-27-09. If previous X-ray films taken by this facility are not available locally but are on file with the Beech Aircraft Corporation, the applicant should present sufficient data so that FAA can obtain these films for evaluation.
 - b. The FAA will notify the applicant of the results of the evaluation and, if appropriate, schedule a date for examination of the qualification of the personnel who will be authorized to review and interpret the films. Any changes in authorized personnel, facilities, repair station equipment, or the inspection procedures established at the time of certification will require FAA evaluation and approval prior to the repair station exercising the privileges of their certificate.
10. REPAIR STATION CERTIFICATE AND OPERATIONS SPECIFICATION. Upon meeting all requirements the FAA District Office will issue an Air Agency Certificate (See Appendix 2) and Repair Station Operations Specification. (See Appendix 3). The operations specifications, in addition to describing the limitations applied to the station, indicate the specification to be used by the station in performing the X-ray inspections. The airworthiness directive is the primary part of the specification. The other part of the specification may be either a civil or military specification currently used by the industry and approved by the Administrator. The

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airworthiness directive takes precedence in any conflicting detail between it and any other specification used.

11. MAINTENANCE RECORD ENTRIES. Persons performing X-ray, visual, and magnetic particle or penetrant inspection, should provide the owner or operator of the aircraft with a maintenance record entry that will comply with FAR 43.9. When X-ray inspection has been satisfactorily completed by the station, approval for return to service should be made in accordance with FAR 145.59.(a). The person performing the X-ray inspection is also required by this AD to enter the date of letter of authorization issued by the FAA District Office in the maintenance records specifically in FAR 91.173 (a)(2).
12. OTHER RATINGS. Nothing in this advisory circular (AC) should be construed as preventing a repair station with this rating from having other ratings. This rating can also be added to an existing repair station certificate when all requirements have been met.



J. A. FERRARESE, Acting Director
Flight Standards Service

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Appendix 1

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION				Form Approved Budget Bureau No. 04-R0097	
APPLICATION FOR REPAIR STATION CERTIFICATE AND/OR RATING					
If additional space is required for any item, attach additional sheets of paper.					
1. REPAIR STATION NAME, NUMBER, LOCATION, & ADDRESS			2. REASON FOR SUBMISSION		
A. OFFICIAL NAME OF STATION		NUMBER	X ORIGINAL APPLICATION FOR CERTIFICATE AND RATING		
A.F. Jones d/b/a		007-00	CHANGE IN RATING		
Bay View X-ray			CHANGE IN LOCATION OR HOUSING AND FACILITIES		
B. LOCATION WHERE BUSINESS WILL BE CONDUCTED			CHANGE IN OWNERSHIP		
Bay View Airport			OTHER (Specify)		
Bay View, Ohio 11463					
C. OFFICIAL MAILING ADDRESS OF REPAIR STATION (Number, street, city, state, and ZIP code)					
P.O. Box 1A					
Bay View, Ohio 11463					
3. RATINGS APPLIED FOR		CLASS	4. LIST OF MAINTENANCE FUNCTIONS CONTRACTED TO OUTSIDE AGENCIES		
X	AIRFRAME	LIMITED	NONE		
	POWERPLANT	Limited Airframe-Beech			
	PROPELLERS	18 Series Aircraft-			
	RADIO	Wing And Center Section			
	INSTRUMENT	Spar X-ray Inspections			
	ACCESSORY				
SPECIALIZED SERVICE					
5. APPLICANT'S CERTIFICATION					
NAME OF OWNER (Include name(s) of individual owner, all partners, or corporation name giving state and date of incorporation)					
A.F. Jones					
I hereby certify that I have been authorized by the repair station identified in item 1 to make this application and that statements and attachment hereto are true and correct to the best of my knowledge.					
DATE		TITLE		AUTHORIZED SIGNATURE	
May 30, 1976		General Manager		A.F. Jones <i>A. F. Jones</i>	
FOR FAA USE ONLY		RECORD OF ACTION REPAIR STATION INSPECTION		Reports Identification Symbol FS 8320-5	
6. REMARKS (Identify by item number. Include deficiencies found, ratings denied)					
7. FINDINGS - RECOMMENDATIONS					
X	A. STATION WAS FOUND TO COMPLY WITH REQUIREMENTS OF FAR 145				
	B. STATION WAS FOUND TO COMPLY WITH REQUIREMENTS OF FAR 145 EXCEPT FOR DEFICIENCIES LISTED IN ITEM 6.				
X	C. RECOMMEND CERTIFICATE WITH RATING APPLIED FOR ON APPLICATION BE ISSUED				8. DATE OF INSPECTION
	D. RECOMMEND CERTIFICATE WITH RATING APPLIED FOR ON APPLICATION (Except those listed in item 6) BE ISSUED				June 15, 1976
9. OFFICE			SIGNATURE(S) OF INSPECTOR(S)		
ASW-GADO-9			A. Carry <i>A. Carry</i>		
ASW-EMDO-10			B. Long <i>B. Long</i>		
10. SUPERVISING OR ASSIGNED INSPECTOR					
ACTION TAKEN		CERTIFICATE ISSUED	INSPECTOR'S SIGNATURE		
X	APPROVED AS SHOWN ON CERTIFICATE ISSUED ON DATE SHOWN →	NUMBER	H. Smith		
		007-00	H. Smith		
	DISAPPROVED	DATE	TITLE		
		July 2, 1976	Chief, General Aviation District Office ASW-GADO-9		

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Appendix 2

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

Air Agency Certificate

Number 007-00

This certificate is issued to

A.F. Jones d/b/a
Bay View X-ray

whose business address is

Bay View Airport
Bay View, Ohio 11463

*upon finding that its organization complies in all respects
with the requirements of the Federal Aviation Regulations
relating to the establishment of an Air Agency, and is
empowered to operate an approved*

with the following ratings:

LIMITED AIRFRAME - BEECH 18 SERIES AIRCRAFT - WING AND CENTER
SECTION SPAR X-RAY INSPECTIONS

*This certificate, unless canceled, suspended, or revoked,
shall continue in effect* INDEFINITELY

Date issued:

July 2, 1976

By direction of the Administrator

H. Smith

H. Smith

This Certificate is not Transferable, AND ANY MAJOR CHANGE IN THE BASIC FACILITIES, OR IN THE LOCATION THEREOF, ASW-GADO-9
SHALL BE IMMEDIATELY REPORTED TO THE APPROPRIATE REGIONAL OFFICE OF THE FEDERAL AVIATION ADMINISTRATION

Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both

The United States of America
Federal Aviation Agency

Repair Station Operations Specifications
(Continuation)

Limitations:

The rating(s) set forth on Air Agency Certificate Number 007-00 is/are limited to the following: Beech 18 Series Aircraft—Wing And Center Section Spar X-ray Inspections.

The specification to be used for this function is Airworthiness Directive 75-27-09 or an AD superseding AD 75-27-09 and MIL-STD-00453A. The Airworthiness Directive will take precedence in any conflicting detail between it and any other specification used.

This rating is issued based on the satisfactory FAA evaluation of the repair station's radiographs and their personnel's interpretation of FAA test films. X-ray inspection conducted under this rating must be of the same quality as those presented to obtain this rating. Any changes in facilities, authorized personnel, repair station equipment, or the inspection procedures established at the time of certification, will require FAA evaluation and approval prior to the repair station exercising the privileges of their certificate.

SAMPLE

Delegated authorities: None

Date issued or revised:

July 2, 1976

FAA Form 890.1 Page 2 (11-63)
USE PREVIOUS EDITION

For the Administrator:

H. Smith

H. Smith

Chief, General Aviation District Office
ASW-GADO-9 (1300)
GPO 801-575