

PLANE SENSE

GENERAL AVIATION INFORMATION



PLANE SENSE

General Aviation Information

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FEDERAL AVIATION ADMINISTRATION
Flight Standards Service

Editorial Note 2003

The following pages contain editorial updates.

*Page i reflects the date of this reprint.

*Page iii contains an updated web site address to access AFS-600's publications.

*Page iii contains updates to phone numbers for obtaining printed publications.

*Pages 26 and 27 contain an updated FAA Form 8130-6, Application for Airworthiness Certificate.

*Page 35 contains an updated web site address to access AC 00-2, Advisory Circular Checklist.

PREFACE

The Flight Standards Service of the Federal Aviation Administration (FAA) publishes *Plane Sense* to acquaint the owner or prospective owner with some fundamental information on the requirements of owning, operating, and maintaining a private airplane.

Anyone who is an aircraft owner, or who is seriously thinking of becoming one, should become familiar with Title 14 of the Code of Federal Regulations (14 CFR). Since the aviation picture is constantly changing, it is suggested that you contact your nearest FAA Flight Standards District Office (FSDO), where the personnel will assist you with the latest requirements of private ownership.

Prospective owners will also find in this publication discussions of Aviation Maintenance Alerts and Airworthiness Directives programs. These programs notify aircraft owners, mechanics, repair stations, and other interested persons about important maintenance issues affecting aircraft and the corrective action that is suggested.

Service Difficulty Reports, Aviation Maintenance Alerts, Airworthiness Directives, and Federal Aviation Regulations can be accessed through the Regulatory Support Division, AFS-600's, Internet web site at <http://afs600.faa.gov>.

While *Plane Sense* cannot cover every issue a prospective owner will face, this handbook will serve as an excellent guide. When questions do arise, do not hesitate to call one of the information sources provided or the local FAA Flight Standards District Office.

This publication may be obtained free of charge from:

U.S. Department of Transportation
Subsequent Distribution Office (SVC-121.23)
Ardmore East Business Center
3341 Q 75th Avenue
Landover, MD 20785

DOT Publications Help Line: 301-322-4961 Fax: 301-386-5394

Comments regarding this publication should be sent to:

Federal Aviation Administration
Airman Testing Standards Branch, AFS-630
P.O. Box 25082
Oklahoma City, OK 73125

This publication supersedes Advisory Circular (AC) 20-5G, *Plane Sense*, dated 1995, with editorial updates in 1996 and 1998.

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BUYING AN AIRCRAFT

When buying a used aircraft, it is wise to have the selected aircraft inspected by a qualified person or facility before you buy. The condition of the aircraft and the state of its maintenance records can be determined by persons familiar with the particular make and model. Prepurchase inspections should be performed by an FAA certificated airframe and powerplant mechanic (A&P) or an approved repair station.



Questions Most Frequently Asked

- 1. Q. What is meant by a clear title?**
- A.** A clear title is a term commonly used by aircraft title search companies to indicate there are no liens (chattel mortgage, security agreement, tax lien, artisan lien, etc.) in the FAA aircraft records. Title searches for the aviation public are not performed by the FAA's Civil Aviation Registry; however, the aircraft records contain all of the ownership and security documents that have been filed with the FAA.

The Civil Aviation Registry records acceptable security instruments. In addition, some states authorize artisan liens (mechanic liens). These also need to be recorded. Check your state's statutes. Federal liens against an owner (drug, repossession, etc.) may not show at all. Know your seller!

- 2. Q. How can I be sure that the aircraft has a clear title?**

- A.** Either search the aircraft records yourself, or have it done by an attorney or qualified aircraft title search company. A list of title search companies qualified in aircraft title and records search can be found on Advisory Circular (AC) Form 8050-55, Title Search Companies. This form is available from the Civil Aviation Registry.

You would not think of purchasing a house until you have the records examined. You should do the same when purchasing an aircraft, which also represents a substantial investment. Even if you are planning to purchase the aircraft from an established dealer, it makes good sense to determine the true status of the aircraft records before you buy. **CAUTION:** FAA registration cannot be used in any civil proceeding to establish proof of ownership!

There is no substitute for examining the aircraft's records to secure an ownership history and to determine if there are any outstanding liens or mortgages. This procedure should help avoid a

delay in registering an aircraft and the headaches many have suffered because they failed to take this one important step before purchasing their aircraft.

3. Q. Where do I go to search the records?

A. Aircraft records maintained by the FAA are on file at the Mike Monroney Aeronautical Center, Registry Building, Oklahoma City, OK. Microfiche copies of aircraft records may be requested for review. For more information on ordering and costs, contact the Civil Aviation Registry at (405) 954-3116. There may be other records on file at federal, state, or local agencies that are not recorded with the FAA.

4. Q. What documents may I expect to receive with my new or used aircraft?

- A.**
- (1) Bill of sale or conditional sales contract.
 - (2) Either FAA Form 8100-2, Standard Airworthiness Certificate, or FAA Form 8130-7, Special Airworthiness Certificate.
 - (3) Maintenance records containing the following information:
 - (a) The total time in service of the airframe, each engine, and each propeller;
 - (b) The current status of life-limited parts of each airframe, engine, propeller, rotor, and appliance;
 - (c) The time since last overhaul of all items installed on the aircraft that are required to be overhauled on a specified time basis;
 - (d) The identification of the current inspection status of the aircraft, including the time since the last inspection required by the inspection program under which the aircraft and its appliances are maintained;

(e) The current status of applicable Airworthiness Directives (AD's), including for each the method of compliance, the AD number, and the revision date. If the AD involves recurring action, the time and date when the next action is required; and

(f) A copy of current major alterations to each airframe, engine, propeller, rotor, and appliance.

(4) Equipment list, and weight and balance data.

(5) Appropriate aircraft flight manual and/or Operating Limitations

5. Q. What manuals should I receive with the aircraft?

A. Manufacturers produce owner's manuals, maintenance manuals, service letters and bulletins, and other technical data pertaining to their aircraft. These may be available from the previous owner but are not required to be transferred to a new owner. If the service manuals are not available from the previous owner, they usually may be obtained from the aircraft manufacturer.

6. Q. What is the meaning of airworthy?

A. Two conditions must be met for a standard category aircraft to be considered airworthy. These conditions are:

- (1) The aircraft conforms to its type design (type certificate). Conformity to type design is considered attained when the required and proper components are installed, and they are consistent with the drawings, specifications, and other data that are part of the type certificate. Conformity would include applicable Supplemental Type Certificates (STC's) and field-approved alterations.
- (2) The aircraft is in condition for safe operation. This refers to the condition of the aircraft with relation to wear and deterioration.

7. Q. Does a current 100-hour or annual inspection mean that the aircraft is in “first-class” condition?

- A. No. It indicates only that the aircraft was found to be in airworthy condition at the time of inspection.

8. Q. Who is responsible for my aircraft's maintenance?

- A. 14 CFR part 91, section 91.403 makes the owner/operator primarily responsible for maintaining the aircraft in an airworthy condition including compliance with Airworthiness Directives. The owner/operator is also responsible for ensuring that maintenance personnel make appropriate entries in the aircraft maintenance records indicating the aircraft has been approved for return to service. It is the responsibility of the owner and operator to have maintenance performed that may be required between scheduled inspections. Inoperative instruments or equipment that can be deferred under 14 CFR section 91.213(d)(2) shall be placarded and maintenance recorded in accordance with 14 CFR part 43, section 43.9.

9. Q. What should I look for before buying an amateur-built aircraft?

- A. (1) Examine the Airworthiness Certificate and its Operating Limitations. The Airworthiness Certificate shall be a Special Airworthiness Certificate, which is used for all aircraft that fall under experimental status and states for what purpose it was issued. [Figure 7] The Operating Limitations specify any operating restrictions that may apply to the aircraft.
- (2) Check the aircraft maintenance records of the airframe, engine, propeller, and accessories. Under 14 CFR sections 91.319(b) and 91.305, all initial flight operations of experimental aircraft may be limited to an assigned flight test area.

This is called Phase I. The aircraft is flown in this designated area until it is shown to be controllable throughout its normal range of speeds and all maneuvers to be executed, and that it has not displayed any hazardous operating characteristics or design features. The required flight time may vary for each type of aircraft and is covered in the Operating Limitations.

After the flight time requirements are met, the owner/operator endorses the aircraft logbook with a statement certifying that the prescribed flight hours are completed and the aircraft complies with 14 CFR section 91.319(b). Phase I records are retained for the life of the aircraft. This concludes Phase I.

- (3) In Phase II, the FAA may prescribe Operating Limitations for an unlimited duration, as appropriate.
- (4) Before taking delivery of the aircraft, make a final prepurchase inspection. Make sure the Airworthiness Certificate, Operating Limitations, Aircraft Data Plate, Weight and Balance Papers, Aircraft Maintenance Records, and any other required documents are with the aircraft. If the Airworthiness Certificate, Operating Limitations, and Aircraft Data Plate are surrendered to the FAA by the original builder, you may not be able to recertificate the aircraft because you are not the builder.

It would be advisable to have someone familiar with the type of aircraft you are interested in check the aircraft for workmanship, general construction integrity, and compliance with applicable CFR's. Contact the Manufacturing Inspection District Office (MIDO) or Flight Standards District Office (FSDO) serving your locale and ask to speak to an inspector who can explain the requirements for experimental certification.

10. Q. Does a 100-hour or annual inspection requirement apply to an amateur-built aircraft?

A. No. Amateur-built aircraft require a condition inspection within the previous 12 calendar months. This inspection requirement and those who are eligible to work on the aircraft are addressed in the Operating Limitations of that particular aircraft.

11. Q. What should I consider when buying a surplus military aircraft?

A. Certain surplus military aircraft are not eligible for FAA certification in the STANDARD, RESTRICTED, or LIMITED classifications. Since no civil aircraft may be flown unless certificated, you should discuss this with the Aviation Safety Inspector (ASI) at your local FSDO, who can advise you of eligible aircraft and certification procedures. An additional source for advice on amateur-built and surplus military aircraft is the Experimental Aircraft Association (EAA), located in Oshkosh, Wisconsin, (414) 426-4800.

AIRCRAFT OWNER RESPONSIBILITIES

As the registered owner of an aircraft, you are responsible for:

1. Having a current Airworthiness Certificate and Certificate of Aircraft Registration in your aircraft.
2. Maintaining your aircraft in an airworthy condition including compliance with all applicable AD's.
3. Assuring that maintenance is properly recorded.
4. Keeping abreast of current regulations concerning the operation and maintenance of your aircraft.
5. Notifying the Civil Aviation Registry, AFS-750, immediately of any change of permanent mailing address, of the sale or export of your aircraft, or of the loss of your eligibility to register an aircraft. [14 CFR part 47, section 47.41]
6. Having a current Emergency Locator Transmitter (ELT). Also if the aircraft is equipped with radios and you plan to fly outside of U.S. boundaries, a current Federal Communication Commission (FCC) Radio Station License is required. An FCC Radio Station License is not required for aircraft operating domestically.



Your aircraft shall be inspected in accordance with an annual inspection or with one of the inspection programs outlined in 14 CFR section 91.409 to maintain a current Airworthiness Certificate.

AIRPLANE OWNER RESPONSIBILITY CHART

RESPONSIBILITY	AIRCRAFT
Registration	Yes
Inspection	Yes
Compulsory insurance (most states)	No
Reporting of accidents	Yes
Required maintenance records	Yes
Maximum speed restrictions	Yes
Controlled maintenance	Yes

Accidents involving your aircraft must be reported to the National Transportation Safety Board (NTSB) as required by Title 49 of the Code of Federal Regulations part 830.

HOW TO REPORT A STOLEN AIRCRAFT OR AIRCRAFT EQUIPMENT

1. Immediately notify the law enforcement agency having jurisdiction at the site of the theft, giving all available information. Request that such information be entered into the computer system of the National Crime Information Center of the FBI, and have the law officer taking the report notify the nearest FAA Automated Flight Service Station (AFSS). The AFSS then issues a nationwide stolen aircraft alert.

NOTE: The AFSS's are prohibited from issuing stolen aircraft alerts based solely on notification of theft by the owner—the report must be made by the law enforcement officer handling the case.

2. Notify:

Aviation Crime Prevention Institute (ACPI)
P.O. Box 30, Hagerstown, MD 2174
Telephone (800) 969-5473
Fax (301) 791-9791
Internet <http://www.acpi.org/index.html>

Give ACPI all available information. ACPI will send notices of the theft to appropriate industry contacts, and embassies, if applicable.

3. Notify your insurance company or agent, as appropriate. In addition, owners/operators are encouraged to keep separate records of serial numbers for powerplants, avionics, and other installed items. Report these serial numbers at the same time the aircraft is reported stolen.



HOW TO REPORT AN AIRCRAFT ACCIDENT

1. By the most expeditious means available, notify the nearest National Transportation Safety Board (NTSB) field office. NTSB field offices are listed in the telephone directories of major cities under U.S. Government.
2. Within 10 days after an accident, you should file a report with the NTSB on NTSB Form 6120.1/2, Pilot/Operator Aircraft Accident Report.
3. Flight Service Stations are also available to take accident information and forward it to the NTSB.

AIRCRAFT REGISTRATION

An aircraft is eligible for registration in the United States only if it is owned by:

1. A U.S. citizen. A U.S. citizen by definition of 14 CFR section 47.2 can be an individual, or partnership where each individual is a U.S. citizen, or a corporation organized under the laws of the United States, state, territory, or possession of the United States of which the president and at least two-thirds of the board of directors are U.S. citizens and 75 percent of the voting interest is owned or controlled by U.S. citizens;
2. A resident alien;
3. A corporation other than classified as a U.S. citizen, lawfully organized and doing business under the laws of the United States or of any state thereof, if the aircraft is based and used primarily in the United States; or
4. A government entity (federal, state, or local).

The aircraft may not be registered in a foreign country during the period it is registered in the United States.



ELIGIBLE REGISTRANTS

If you purchase an aircraft, you must apply for a Certificate of Aircraft Registration from the Civil Aviation Registry before it may be operated. Do not depend on a bank, loan company, aircraft dealer, or anyone else to submit the application for registration. Do it yourself (in the name of the owner, not in the name of the bank or other mortgage holder).

You can help make sure your aircraft is properly registered by verifying that the aircraft description entered on the Aircraft Registration Application and Aircraft Bill of Sale (or equivalent) is identical to the data inscribed on the aircraft manufacturer's data plate. The data plate is permanently affixed to the aircraft fuselage by the manufacturer. This quick and simple check should help avoid delays in the issuance of the AC Form 8050-3, Certificate of Aircraft Registration. [Figure 3]

AIRCRAFT PREVIOUSLY REGISTERED IN THE UNITED STATES

You should immediately submit evidence of ownership, an AC Form 8050-1, Aircraft Registration Application, and a \$5 registration fee to:

Federal Aviation Administration
Civil Aviation Registry, AFS-750
Mike Monroney Aeronautical Center
P.O. Box 25504
Oklahoma City, OK 73125

Fees required for aircraft registration may be paid by check or money order made payable to the Treasury of the United States.

A bill of sale form that meets the FAA's requirements for evidence of ownership is AC Form 8050-2, Aircraft Bill of Sale, which may be obtained from the nearest FSDO. The form includes an information and instruction sheet. If a conditional sales contract is the evidence of ownership, an additional \$5 fee is required for recording. For FAA registration, the bill of sale need not be notarized. [Figure 1]

The Aircraft Registration Application includes an information and instruction sheet. Submit the white and green copies to the Civil Aviation Registry; keep the pink copy in your aircraft as evidence of application for registration until you receive your Certificate of Aircraft Registration, AC Form 8050-3. The pink copy is good for 90 days and is legal only in the United States. If you plan to operate the aircraft outside the United States, you need to contact the Civil Aviation Registry at (405) 954-3116 and receive temporary authority by fax. Registration certificates are issued to the person whose name is on the application. [Figure 2]

If there is a break in the chain of ownership of the aircraft (i.e., if it is not being purchased from the last registered owner), you are required to submit conveyances to complete the chain of ownership through all intervening owners, including yourself, to the Civil Aviation Registry.

UNITED STATES OF AMERICA U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION		<small>FORM APPROVED OMB NO. 2120-0042</small>												
AIRCRAFT BILL OF SALE														
FOR AND IN CONSIDERATION OF \$ <u>1.00</u> THE UNDERSIGNED OWNER(S) OF THE FULL LEGAL AND BENEFICIAL TITLE OF THE AIRCRAFT DESCRIBED AS FOLLOWS:														
<small>UNITED STATES REGISTRATION NUMBER</small> <u>N 2033D</u>														
<small>AIRCRAFT MANUFACTURER & MODEL</small> <u>BEECH C-35</u>														
<small>AIRCRAFT SERIAL No.</small> <u>D-3384</u>														
DOES THIS <u>20</u> DAY OF <u>SEPT</u> 19 <u>92</u> HEREBY SELL, GRANT, TRANSFER AND DELIVER ALL RIGHTS, TITLE, AND INTERESTS IN AND TO SUCH AIRCRAFT UNTO:		<small>Do Not Write In This Block FOR FAAUSE ONLY</small>												
PURCHASER	<small>NAME AND ADDRESS (IF INDIVIDUAL(S), GIVE LAST NAME, FIRST NAME, AND MIDDLE INITIAL)</small> Kruse, Robert L. 1000 Beechcraft Rd Oklahoma City, OK 73100													
	<small>DEALER CERTIFICATE NUMBER</small>													
<small>AND TO HOLD UNLESS ABILITY THEREOF IS SPECIFICALLY AFFIRMED AND WHEREIN THE TITLE IS THEREBY</small>														
<small>EXECUTORS, ADMINISTRATORS, AND ASSIGNS TO HAVE</small>														
IN TESTIMONY WHEREOF I HAVE SET MY HAND AND SEAL THIS <u>20</u> DAY OF <u>SEPT</u> 19 <u>92</u>														
SELLER	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"><small>NAME(S) OF SELLER (TYPED OR PRINTED)</small></th> <th style="width: 30%;"><small>SIGNATURE(S) (IN INK, IF EXECUTED FOR CO-OWNERSHIP, ALL MUST SIGN.)</small></th> <th style="width: 40%;"><small>TITLE (TYPED OR PRINTED)</small></th> </tr> </thead> <tbody> <tr> <td>Gary L. Walker</td> <td><i>Gary L. Walker</i></td> <td>Owner</td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	<small>NAME(S) OF SELLER (TYPED OR PRINTED)</small>	<small>SIGNATURE(S) (IN INK, IF EXECUTED FOR CO-OWNERSHIP, ALL MUST SIGN.)</small>	<small>TITLE (TYPED OR PRINTED)</small>	Gary L. Walker	<i>Gary L. Walker</i>	Owner							
<small>NAME(S) OF SELLER (TYPED OR PRINTED)</small>	<small>SIGNATURE(S) (IN INK, IF EXECUTED FOR CO-OWNERSHIP, ALL MUST SIGN.)</small>	<small>TITLE (TYPED OR PRINTED)</small>												
Gary L. Walker	<i>Gary L. Walker</i>	Owner												
<small>ACKNOWLEDGMENT (NOT REQUIRED FOR PURPOSES OF FAA RECORDING; HOWEVER, MAY BE REQUIRED BY LOCAL LAW FOR VALIDITY OF THE INSTRUMENT.)</small>														
ORIGINAL: TO FAA														
<small>AC Form 8050-2 (9/92) (NSN 0052-00-629-0003) Supersedes Previous Edition</small>														

Figure 1—AC Form 8050-2, Aircraft Bill of Sale.

UNITED STATES OF AMERICA DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION-MIKE MONROEY AERONAUTICAL CENTER AIRCRAFT REGISTRATION APPLICATION		CERT. ISSUE DATE	
UNITED STATES REGISTRATION NUMBER N 2631A		<u>FOR FAA USE ONLY</u>	
AIRCRAFT MANUFACTURER & MODEL PIPER PA-22-135			
AIRCRAFT SERIAL No. 22-903			
TYPE OF REGISTRATION (Check one box)			
<input checked="" type="checkbox"/> 1. Individual <input type="checkbox"/> 2. Partnership <input type="checkbox"/> 3. Corporation <input type="checkbox"/> 4. Co-owner <input type="checkbox"/> 5. Gov't. <input type="checkbox"/> 8. Non-Citizen Corporation			
NAME OF APPLICANT(Person(s) shown on evidence of ownership. If individual, give last name, first name, and middle initial.)			
WEAVER, MARTIN E.			
TELEPHONE NUMBER: (405) 555-6471			
ADDRESS (Permanent mailing address for first applicant listed.)			
Number and street: _____			
Rural Route: Rt. 3 Box 17		P.O. Box _____	
CITY Tuttle	STATE OK	ZIP CODE 73088	
<input type="checkbox"/> CHECK HERE IF YOU ARE ONLY REPORTING A CHANGE OF ADDRESS ATTENTION! Read the following statement before signing this application. This portion MUST be completed.			
A false or dishonest answer to any question in this application may be grounds for punishment by fine and/or imprisonment (U.S. Code, Title 18, Sec. 1001)			
<u>CERTIFICATION</u>			
I/WE CERTIFY:			
(1) That the above aircraft is owned by the undersigned applicant, who is a citizen (including corporations) of the United States. (For voting trust, give name of trustee: _____), or: <u>CHECK ONE AS APPROPRIATE</u>			
a. <input type="checkbox"/> A resident alien, with alien registration (Form 1-151) No. _____			
b. <input type="checkbox"/> A non-citizen corporation organized and doing business under the laws of (state) _____ and said aircraft is based and primarily used in the United States. Records or flight hours are available for inspection at _____			
(2) That the aircraft is not registered under the laws of any foreign country; and			
(3) That legal evidence of ownership is attached or has been filed with the Federal Aviation Administration.			
NOTE: If executed for co-ownership all applicants must sign. Use reverse side if necessary.			
TYPE OR PRINT NAME BELOW SIGNATURE			
EACH PART OF THIS APPLICATION MUST BE SIGNED IN INK.	SIGNATURE <i>Martin E. Weaver</i> Martin	TITLE Owner	DATE 04-02-93
	SIGNATURE	TITLE	DATE
	SIGNATURE	TITLE	DATE
NOTE: Pending receipt of the Certificate of Aircraft Registration, the aircraft may be operated for a period not in excess of 90 days, during which time the PINK copy of this application must be carried in the aircraft.			

AC Form 8050-1 (12/90) (0052-00-628-9007) Supersedes Previous Edition

Figure 2—AC Form 8050-1, Aircraft Registration Application.

The Aircraft Registration Application may also be used to report a change of address by the aircraft owner. The FAA issues a revised certificate at no charge. If the certificate is lost, destroyed, or mutilated, a replacement certificate may be obtained at the written request of the holder. Send the request and \$2 (check or money order payable to the Treasury of the United States) to:

Federal Aviation Administration
Civil Aviation Registry, AFS-750
P.O. Box 25504
Oklahoma City, OK 73125

The request should describe the aircraft by make, model, serial number, and registration number. If operation of the aircraft is necessary before receipt of the duplicate certificate, the Civil Aviation Registry may, if requested, send temporary authority by fax. Include in your request your full address, fax number, and a telephone number where you can be reached.

AIRCRAFT PREVIOUSLY REGISTERED IN A FOREIGN COUNTRY

If you are contemplating purchasing an aircraft registered in a foreign country, contact the local FSDO for certification assistance and the Civil Aviation Registry at (405) 954-3116 for registration assistance.

CERTIFICATE OF AIRCRAFT REGISTRATION

A Certificate of Aircraft Registration should be in the aircraft before an Airworthiness Certificate can be issued. [Figure 3] Some of the conditions under which the Certificate of Aircraft Registration becomes invalid, as described in 14 CFR section 47.41 are:

1. The aircraft becomes registered under the laws of a foreign country;
2. The registration of the aircraft is canceled at the written request of the holder of the certificate;
3. The aircraft is totally destroyed or scrapped;
4. The holder of the certificate loses his or her U.S. citizenship or status as a resident alien without becoming a U.S. citizen;
5. The ownership of the aircraft is transferred; or
6. Thirty days have elapsed since the death of the holder of the certificate.


When an aircraft is sold, destroyed, or scrapped, the owner shall notify the FAA by filling in the back of the Certificate of Aircraft Registration and mailing it to:

Federal Aviation Administration
Civil Aviation Registry, AFS-750
P.O. Box 25504
Oklahoma City, OK 73125

The U.S. registration and nationality marking should be removed from an aircraft before it is delivered to a purchaser who is not eligible to register it in the United States. The endorsed Certificate of Aircraft Registration should be forwarded to the Civil Aviation Registry.

A dealer's aircraft registration certificate is another form of registration. It is valid only for flights within the United States by the manufacturer or a dealer for flight testing or demonstration for sale. It should be removed by the dealer when the aircraft is sold.

The certificate of registration serves as conclusive evidence of nationality but is not a title and is not evidence of ownership in any proceeding in which ownership is at issue.

REGISTRATION NOT TRANSFERABLE		
UNITED STATES OF AMERICA DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION CERTIFICATE OF AIRCRAFT REGISTRATION		This certificate must be in the aircraft when operated.
NATIONALITY AND REGISTRATION MARKS	N 48SB	AIRCRAFT SERIAL NO. 9411
MANUFACTURER AND MANUFACTURER'S DESIGNATION OF AIRCRAFT PITTS SIS		
ICAO Aircraft Address Code: 51363722		
ISSUED TO	JACOBS JANE M 520 BIPLANE LANE TECUMSEH, MI 49286	This certificate is issued for registration purposes only and is not a certificate of title. The Federal Aviation Administration does not determine rights of ownership between private persons.
It is certified that the above described aircraft has been entered on the register of the Federal Aviation Administration, United States of America, in accordance with the Convention on International Civil Aviation dated December 7, 1944, and with the Federal Aviation Act of 1958, and regulations issued thereunder.		 U.S. Department of Transportation Federal Aviation Administration
DATE OF ISSUE	JUNE 3, 1995	ADMINISTRATOR

AC Form 8050-3(8/97) Supersedes previous editions

EFFECT OF REGISTRATION

Section 501(f) of the Federal Aviation Act of 1958(49 U.S.C. 1401) provides: "...Registration shall not be evidence of ownership of aircraft in any proceeding in which such ownership by a particular person is, or may be, in issue."
THIS CERTIFICATE MUST BE SIGNED AND RETURNED BY THE REGISTERED OWNER WITHIN 60 DAYS WHEN IT IS NO LONGER IN EFFECT FOR ANY REASON UNDER 14 C.F.R. 47.414)(1) THROUGH (9)

<p>a. <input type="checkbox"/> Registration is cancelled at the request of the owner. (Also check and/or complete Block, b, c, d, e, or f).</p> <p>b. <input type="checkbox"/> The aircraft is totally destroyed or scrapped.</p> <p>c. <input type="checkbox"/> United States citizenship has been lost, or the owner's status as a resident alien has changed (unless changed to that of a U.S. citizen).</p> <p>d. <input type="checkbox"/> Thirty days have elapsed since the death of the registered owner (estate representative of owner).</p>	<p>e. <input type="checkbox"/> The aircraft is to be registered under the laws of a foreign country: _____ (NAME OF FOREIGN COUNTRY)</p> <p>f. <input type="checkbox"/> The ownership of the aircraft is transferred to: _____ (NAME) _____ (ADDRESS) _____ (CITY, STATE, ZIP)</p>
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

(SIGNATURE) _____ (TITLE) _____ (DATE) _____

This certificate must be returned to:
 AIRCRAFT REGISTRATION BRANCH, P.O. BOX 25504, OKLAHOMA CITY, OKLAHOMA 73125-0504

RETAIN THIS INFORMATION FOR FUTURE REFERENCE

CHANGE OF ADDRESS

Federal Aviation Regulations require that the registered owner of the aircraft shall report in writing within 30 days any change of permanent mailing address. A revised Certificate of Registration will be issued without charge. The Application for Registration Form 8050-1 may be used to report a change of address.

REPLACEMENT OF CERTIFICATE

If this certificate is lost, destroyed, or mutilated, replacement may be obtained at the written request of the holder. Send your request and \$2.00 (check or money order made payable to United States Treasury) to:
 Aircraft Registration Branch
 P.O. Box 25504
 Oklahoma City, Oklahoma 73125-0504

NOTE: All correspondence should include the registration "N" number, manufacturer, model, and serial number of the aircraft.

Figure 3—AC Form 8050-3, Certificate of Aircraft Registration.

SPECIAL REGISTRATION NUMBER (N NUMBER)

A U.S. identification number of your choice may be reserved, if available. This number may not exceed five characters in addition to the prefix letter "N." All five characters may be numbers (N11111) or four numbers and one suffix letter (N1000A), or one to three numbers and/or two suffix letters (N100AA) may be used.


In your written request, list up to five numbers in order of preference in the event the first choice is not available; also include a \$10 fee. If your request is approved, you are notified that the number has been reserved for 1 year. You are also

informed that this reservation may be extended on a yearly basis for a \$10 renewal fee.

When you are ready to place the number on your aircraft, you should request permission by forwarding a complete description of the aircraft to the Civil Aviation Registry. Permission to place the special number on your aircraft is given on AC Form 8050-64, Assignment of Special Registration Numbers. When the number is placed on your aircraft, sign and return the original to the Civil Aviation Registry within 5 days. [Figure 4]

The duplicate of AC Form 8050-64, together with your Airworthiness Certificate, should be presented to an ASI within 10 days from placing the new registration number on your aircraft. The inspector will issue a revised Airworthiness Certificate

showing the new registration number. The old registration certificate and the duplicate AC Form 8050-64 should be carried in the aircraft until the new registration certificate is received. [14 CFR section 91.203(a)(1)]

 U.S. Department of Transportation Federal Aviation Administration	ASSIGNMENT OF SPECIAL REGISTRATION NUMBERS		Special Registration Number
	Aircraft Make and Model	Pitts S1S	N 48SB
Serial Number	9411	Present Registration Number	
		N 159F	
Jacobs, Mark W. 520 Biplane Lane Tecumseh, MI 49286		Issue Date:	06-03-99
		<small>This is your authority to change the United States registration number on the above described aircraft to the special registration number shown.</small> <small>Carry duplicate of this form in the aircraft together with the old registration certificate as interim authority to operate the aircraft pending receipt of revised certificate of registration. Obtain a revised certificate of airworthiness from your nearest Flight Standards District Office.</small> <small>The latest FAA Form 8130-6, Application For Airworthiness on file is dated:</small> <small>The airworthiness classification and category:</small>	
INSTRUCTIONS:			
<small>SIGN AND RETURN THE ORIGINAL of this form to the Civil Aviation Registry, AFS-750, within 5 days after the special registration number is affixed on the aircraft. A revised certificate will then be issued. This authority is valid for 90 days from the issue date.</small> <small>The authority to use the special number expires:</small>			
<small>CERTIFICATION: I certify that the special registration number was placed on the aircraft described above.</small> Signature of Owner: Title of Owner: Date Placed on Aircraft:		<small>RETURN FORM TO:</small> Civil Aviation Registry, AFS-750 P.O. Box 25504 Oklahoma City, Oklahoma 73125-0504	

AC Form 8050-64 (5/95) Supersedes Previous Edition

Figure 4—AC Form 8050-64, Assignment of Special Registration Numbers.

REGISTRATION OF AMATEUR-BUILT AIRCRAFT

AC Form 8050-88, Identification Number Assignment and Registration of Amateur-Built Aircraft, is used by the Civil Aviation Registry to notify you of action taken on your application for registration of amateur-built aircraft. The reverse side of AC Form 8050-88 is an Affidavit of Ownership for Amateur-Built Aircraft. Complete the reverse side of AC Form 8050-88 when

applying for registration of an amateur-built aircraft. You may designate an aircraft serial number of your choice at this time. This becomes the official aircraft serial number. [Figure 5] Submit AC Form 8050-88 along with AC Form 8050-1 to register your aircraft. If you have not reserved a special N number, the Civil Aviation Registry assigns a number at this time.

ADDITIONAL INFORMATION

14 CFR part 47 specifies the requirement for registering aircraft. For information concerning 14 CFR part 47 or any circumstances not discussed herein, contact:

Federal Aviation Administration
 Civil Aviation Registry, AFS-750
 P.O. Box 25504
 Oklahoma City, OK 73125

Telephone (405) 954-3116 for registration information and (405) 954-4206 for N number information. State registration of aircraft is required in approximately 60 percent of the states. Check for your state's requirement.

AFFIDAVIT OF OWNERSHIP FOR AMATEUR-BUILT AIRCRAFT

U.S. Identification Number N48SB
Builder's Name MARK W. JACOBS
Model PITTS S1S Serial Number 9411
Class (airplane, rotorcraft, glider, etc.) AIRPLANE
Type of Engine Installed (reciprocating, turbopropeller, etc.) RECIPROCATING
Number of Engines Installed ONE
Manufacturer, Model, and Serial Number of each Engine Installed _____
LYCOMING, IO-360-C1C, L-13154-51A
Built for Land or Water Operation LAND
Number of Seats ONE

MUST CHECK ONE

- More than 50% of the above-described aircraft was built from miscellaneous parts and I am the owner.
- More than 50% of the above-described aircraft was built from a kit (prefabricated parts) and I am the owner. The bill of sale from the kit manufacturer is attached.

Mark W. Jacobs
(Signature of Owner)
Address 520 BIPLANE LANE City TECUMSEH
State MI zip Code 49286 Telephone (517) 555-2827

State of MICHIGAN

County of LENAWEE

Subscribed and sworn to before me this 1st day of APRIL, 1995.

My commission expires 12-31-95

J.D. SIMM J.D. Simm
(Signature of Notary Public)

Figure 5—AC Form 8050-88, Affidavit of Ownership for Amateur-Built Aircraft (reverse side).

AIRWORTHINESS CERTIFICATE

An Airworthiness Certificate is issued by a representative of the FAA after the aircraft has been inspected, is found to meet the requirements of the CFR's, and is in condition for safe operation. The certificate must be displayed in the aircraft so that it is legible to passengers or crew whenever the aircraft is operated. The Airworthiness Certificate is transferred with the aircraft, except when it is sold to a foreign purchaser.



FAA Form 8100-2, Standard Airworthiness Certificate, is issued for aircraft type certificated in the normal, utility, acrobatic, commuter, and transport categories, or for manned free balloons. An explanation of each term in the certificate follows: [Figure 6]

Item 1.

Nationality—The "N" indicates the aircraft is of U.S. registry. Registration Marks—the number, in this case 2631A, is the registration number assigned to the aircraft.

Item 2.

Indicates the manufacturer, make, and model of the aircraft.

Item 3.

Indicates the manufacturer's serial number assigned to the aircraft, as noted on the aircraft data plate.

Item 4.

Indicates that the aircraft, in this case, shall be operated in accordance with the limitations specified for the NORMAL category.

Item 5.

Indicates the aircraft has been found to conform to its type certificate and is considered in condition for safe operation at the time of inspection and issuance of the certificate. Any exemptions from the applicable airworthiness standards are briefly noted here and the exemption number given. The word NONE is entered if no exemption exists.

Item 6.

Indicates the Airworthiness Certificate is in effect indefinitely if the aircraft is maintained in accordance with 14 CFR parts 21, 43, and 91, and the aircraft is registered in the United States. Also included are the date the certificate was issued, the signature of the FAA representative, and his or her office identification.

FAA Form 8100-2 remains in effect as long as the aircraft receives the required maintenance and is properly registered in the United States. Flight safety relies, in part, on the condition of the aircraft, which may be determined on inspection by mechanics, approved repair stations, or manufacturers who meet specific requirements of 14 CFR part 43.

FAA Form 8130-7, Special Airworthiness Certificate, is issued for all aircraft certificated in other than the Standard classifications, such as Experimental, Restricted, Limited, and Provisional.

An explanation of each term in the certificate follows as issued for an experimental amateur-built aircraft: [Figure 7]

Item A.

Category/Designation—In this case, the category is EXPERIMENTAL.

Purpose—The purpose for issuing the certificate, in this case, OPERATING AMATEUR-BUILT AIRCRAFT.

Item B.

Manufacturer does not apply in this case.

Item C.

Flight does not apply in this case.

Item D.

Indicates the N number, builder, serial number, and model of the aircraft when certificated.

Item E.

Indicates the date when the final inspection was completed and is considered in condition for safe operation and issuance of the certificate. Also shows when the Operating Limitations were issued, if they expire, and the signature of the FAA representative, and his or her office identification.

If you are interested in purchasing an aircraft classed as other than Standard, it is suggested that you contact the local FAA MIDO or FSDO for an explanation of airworthiness requirements and the limitations of such a certificate.

An additional source for advice in such matters is the Experimental Aircraft Association (EAA), located in Oshkosh, Wisconsin, (414) 426-4800.

In summary, the FAA initially determines that your aircraft is in condition for safe operation and conforms to type design, then issues an Airworthiness Certificate.

AC 21-12, Application for U.S. Airworthiness Certificate, and AC 20-27, Certification and Operation of Amateur-Built Aircraft, provide additional information.

UNITED STATES OF AMERICA DEPARTMENT OF TRANSPORTATION—FEDERAL AVIATION ADMINISTRATION STANDARD AIRWORTHINESS CERTIFICATE			
1 NATIONALITY AND REGISTRATION MARKS N2631A	2 MANUFACTURER AND MODEL PIPER PA-22-135	3 AIRCRAFT SERIAL NUMBER 22-903	4 CATEGORY NORMAL
5 AUTHORITY AND BASIS FOR ISSUANCE <small>This airworthiness certificate is issued pursuant to the Federal Aviation Act of 1958 and certifies that, as of the date of issuance, the aircraft to which issued has been inspected and found to conform to the type certificate therefor, to be in condition for safe operation, and has been shown to meet the requirements of the applicable comprehensive and detailed airworthiness code as provided by Annex B to the Convention on International Civil Aviation, except as noted herein. Exceptions:</small> <p style="text-align: center;">NONE</p>			
6 TERMS AND CONDITIONS <small>Unless sooner surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator, this airworthiness certificate is effective as long as the maintenance, preventative maintenance, and alterations are performed in accordance with Parts 21, 43, and 91 of the Federal Aviation Regulations, as appropriate, and the aircraft is registered in the United States.</small>			
DATE OF ISSUANCE 08-10-95	FAA REPRESENTATIVE <i>Marion W. Williams</i> MARION W. WILLIAMS	DESIGNATION NUMBER SW-FSDO-OKC	
<small>Any alteration, reproduction, or misuse of this certificate may be punishable by a fine not exceeding \$1,000, or imprisonment not exceeding 3 years, or both. THIS CERTIFICATE MUST BE DISPLAYED IN THE AIRCRAFT IN ACCORDANCE WITH APPLICABLE FEDERAL AVIATION REGULATIONS.</small>			
FAA Form 8100-2 (8-82)		GPO 892-804	

Figure 6—FAA Form 8100-2, Standard Airworthiness Certificate.

UNITED STATES OF AMERICA DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION SPECIAL AIRWORTHINESS CERTIFICATE			
A	CATEGORY/DESIGNATION	EXPERIMENTAL	
	PURPOSE	OPERATING AMATEUR-BUILT AIRCRAFT	
B	MANUFACTURER	NAME	N/A
		ADDRESS	N/A
C	FLIGHT	FROM	N/A
		TO	N/A
D	N- 48SB	SERIAL NO.	9411
	BUILDER MARK W. JACOBS	MODEL	PITTS S1S
E	DATE OF ISSUANCE	04-01-95	EXPIRY UNLIMITED
	OPERATING LIMITATIONS DATED	04-01-95	ARE A PART OF THIS CERTIFICATE
	SIGNATURE OF FAA REPRESENTATIVE <i>Darrel A. Freeman</i> Darrel A. Freeman	DESIGNATION OR OFFICE NO. OKC-MIDO-41	
<small>Any alteration, reproduction or misuse of this certificate may be punishable by a fine not exceeding \$1,000 or imprisonment not exceeding 3 years, or both. THIS CERTIFICATE MUST BE DISPLAYED IN THE AIRCRAFT IN ACCORDANCE WITH APPLICABLE FEDERAL AVIATION REGULATIONS.</small>			
FAA FORM 8130-7 (10/82)		SEE REVERSE SIDE	

Figure 7—FAA Form 8130-7 (pink), Special Airworthiness Certificate.

AIRCRAFT MAINTENANCE

Maintenance means the preservation, inspection, overhaul, and repair of aircraft, including the replacement of parts. A **PROPERLY MAINTAINED AIRCRAFT IS A SAFE AIRCRAFT.**

The purpose of maintenance is to ensure that the aircraft remains airworthy throughout its operational life.

Although maintenance requirements vary for different types of aircraft, experience shows that most aircraft need some type of preventive maintenance every 25 hours or less of flying time, and minor maintenance at least every 100 hours. This is influenced by the kind of operation, climatic conditions, storage facilities, age, and construction of the aircraft. Maintenance manuals are available from aircraft manufacturers or commercial vendors with revisions for maintaining your aircraft.



INSPECTIONS

14 CFR section 91.403 places primary responsibility on the owner or operator for maintaining an aircraft in an airworthy condition. Certain inspections shall be performed on your aircraft, and you must maintain the airworthiness of the aircraft between required inspections by having any defects corrected.

14 CFR part 91, subpart E requires the inspection of all civil aircraft at specific intervals to determine the overall condition. The interval generally depends on the type of operations in which the aircraft is engaged. Some aircraft need to be inspected at least once every 12 calendar months, while inspection is required for others after each 100 hours of operation. In other instances, an aircraft may be inspected in accordance with an inspection system set up to provide for total inspection of the aircraft on the basis of calendar time, time in service, number of system operations, or any combination of these.

All inspections shall follow the Manufacturer Maintenance Manual, including the Instructions for Continued Airworthiness concerning inspection intervals, parts replacement, and life-limited items as applicable to your aircraft.

To determine the specific inspection requirements and rules for the performance of inspections, refer to 14 CFR part 91, subpart E which prescribes the requirements for various types of operations.

Annual Inspection.

Any reciprocating-engine powered or single-engine turbojet/turbo propeller powered small aircraft (12,500 pounds and under) flown for business or pleasure is required to be inspected at least annually by an FAA certificated A&P mechanic holding an Inspection Authorization (IA), by an FAA certificated repair station that is appropriately rated, or by the manufacturer of the aircraft. The aircraft may not be operated unless the annual inspection has been performed within the preceding 12 calendar months. A period of 12 calendar months extends from any day of a month to the last day

of the same month the following year. However, an aircraft with the annual inspection overdue may be operated under a special flight permit issued by the FAA for the purpose of flying the aircraft to a location where the annual inspection can be performed.

100-Hour Inspection.

Reciprocating-engine powered and single-engine turbojet/turbo propeller powered aircraft (12,500 pounds and under) used to carry passengers for hire or used for flight instruction shall be inspected within each 100 hours of time in service by an FAA certificated A&P mechanic, an FAA certificated repair station that is appropriately rated, or the aircraft manufacturer. An annual inspection is acceptable as a 100-hour inspection, but the reverse is not true.

Other Inspection Programs.

The annual and 100-hour inspection requirements do not apply to large (over 12,500 pounds) airplanes, turbojets, or turbopropeller-powered multiengine airplanes, or to airplanes for which

the owner or operator complies with the progressive inspection requirements. Details of these requirements may be determined by reference to 14 CFR section 43.11; 14 CFR part 91, subpart E; and by inquiry at the local FSDO.

Altimeter System Inspection.

14 CFR section 91.411 requires that the altimeter, encoding altimeter, and related system be tested and inspected in the preceding 24 calendar months before being operated in controlled airspace under Instrument Flight Rules (IFR).

Transponder Inspection.

14 CFR section 91.413 requires that before a transponder can be used under 14 CFR section 91.215(a), it shall be tested and inspected within the preceding 24 calendar months.

Preflight Inspection.

The CFR's require a pilot to conduct a thorough preflight inspection before every flight to ensure that the aircraft is safe for flight.

PREVENTIVE MAINTENANCE

The CFR's list approximately two dozen relatively uncomplicated repairs and procedures defined as preventive maintenance. Certificated pilots, excluding student and recreational pilots, may perform preventive maintenance on any aircraft owned or operated by them that are not used in

air carrier service. These preventive maintenance operations are listed in 14 CFR part 43, appendix A, under Preventive Maintenance. 14 CFR part 43 also contains other rules to be followed in the maintenance of aircraft.

REPAIRS AND ALTERATIONS

All repairs and alterations of standard airworthiness certificated aircraft are classed as either major or minor. 14 CFR part 43, appendix A, describes the alterations and repairs considered major. Major repairs or major alterations shall be approved for return to service on FAA Form 337, Major Repairs and Major Alterations, by an appropriately rated certificated repair station, an FAA certificated A&P mechanic holding an IA,

or a representative of the FAA Administrator. Minor repairs and minor alterations may be approved for return to service with a proper entry in the maintenance records by an FAA certificated A&P mechanic or an appropriately certificated repair station.

Modifications of experimental aircraft require the notification of your local FSDO.

AIRCRAFT MAINTENANCE RECORDS

An aircraft owner is required to keep aircraft maintenance records for the airframe, engine, propeller, and appliances. These records must contain a description of the work performed on the aircraft, the date the work was completed, the certified mechanic's signature, the kind of FAA certificate, and the certificate number of the person approving the aircraft for return to service. The owner of an aircraft shall also ensure that maintenance personnel make appropriate entries in the aircraft maintenance records indicating the aircraft has been approved for return to service. The owner's aircraft records shall also contain the inspections required pursuant to 14 CFR section 91.409.

Proper management of aircraft operations begins with a good system of maintenance records. A properly completed maintenance record provides the information needed by the owner/operator and maintenance personnel to determine when scheduled inspections and maintenance are to be performed.

1. There shall be records of maintenance and of 100-hour, annual, progressive, and other required or approved inspections for each aircraft, including the airframe, each engine, propeller, rotor, and appliance. These records may be discarded when the work is repeated or superseded by other work, or 1 year after the work is performed.
2. There shall also be records of:
 - a. The total time in service of the airframe, each engine, and each propeller;
 - b. The current status of life-limited parts of each airframe, engine, propeller, rotor, and appliance;
 - c. The time since the last overhaul of all items installed on the aircraft, which are required to be overhauled on a specified time basis;
 - d. The identification of the current inspection status of the aircraft, including the time since the last inspection required by the inspection program under which the aircraft and its appliances are maintained;
 - e. The current status of applicable AD's including, for each, the method of compliance, the AD number, and the revision date. If the AD involves recurring action, the time and date when the next action is required; and
 - f. A copy of the current major alterations to each airframe, engine, propeller, and appliance.

These records are retained by the owner/operator and are transferred with the aircraft when it is sold.

Keep in mind that as a result of repairs or alterations, such as replacing radios and installing speed kits, it may be necessary to amend the weight and balance report, equipment list, flight manual, etc.

ENTRIES INTO THE AIRCRAFT MAINTENANCE RECORDS

1. 14 CFR section 43.9 entries.

Any person who maintains, rebuilds, or alters an aircraft, airframe, aircraft engine, propeller, or appliance shall make an entry containing:

- a. A description of the work or some reference to data acceptable to the FAA;
- b. The date the work was completed;
- c. The name of the person who performed the work; and
- d. If the work is approved for return to service, the signature, certificate number, and kind of certificate held by the person approving the aircraft for return to service.

2. 14 CFR section 43.11 entries.

When a mechanic approves or disapproves an aircraft for return to service for an annual, 100-hour, or progressive inspection, an entry shall be made including:

- a. Aircraft time in service;
- b. The type of inspection;
- c. The date of inspection;
- d. The signature, certificate number, and kind of certificate held by the person approving or disapproving the aircraft for return to service; and
- e. A signed and dated listing of discrepancies and unairworthy items.

3. 14 CFR section 91.409(e)—Airplanes.

Inspection entries for 14 CFR section 91.409(e). Airplanes (those over 12,500 pounds, turbo jet, or turbopropeller-powered multiengine airplanes) are made according to 14 CFR section 43.9 and they shall include:

- a. The kind of inspection performed;
- b. A statement by the mechanic that it was performed in accordance with the instructions and procedures for the kind of inspection program selected by the owner; and

- c. If the aircraft is not approved for return to service, statement that a signed and dated list of any defects found during the inspection was given to the owner.

4. FAA Form 337, Major Repairs and Major Alterations.

A mechanic who performs a major repair or major alteration shall record the work on FAA Form 337 and have the work inspected and approved by a mechanic who holds an Inspection Authorization. A signed copy shall be given to the owner and another copy sent to the local FSDO within 48 hours after the aircraft has been approved for return to service. However, when a major repair is done by a certificated repair station, the customer's work order may be used and a release given as outlined in 14 CFR part 43, appendix B. [Figures 8 and 9]

5. 14 CFR section 91.411—Altimeter and Static Tests.

14 CFR section 91.411 requires that every airplane or helicopter operated in controlled airspace under IFR conditions have each static pressure system, each altimeter, and each automatic pressure altitude reporting system tested and inspected every 24 calendar months. The mechanic shall enter into the records:

- a. A description of the work;
- b. The maximum altitude to which the altimeter was tested; and
- c. The date and signature of the person approving the aircraft for return to service.

6. 14 CFR section 91.413—Transponder Tests.

14 CFR section 91.413 requires that anyone operating an Air Traffic Control (ATC) transponder specified in 14 CFR section 91.215(a) have it tested and inspected every 24 calendar months. The mechanic shall enter into the records:

- a. A description of the work.
- b. The date and signature of the person

MAJOR REPAIR AND ALTERATION (Airframe, Powerplant, Propeller, or Appliance)		Form Approved OMB No. 2120-0020 For FAA Use Only
U.S. Department of Transportation Federal Aviation Administration		Office Identification
INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This report is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty not to exceed \$1,000 for each such violation (Section 901 Federal Aviation Act of 1958).		
1. Aircraft	Make Cessna	Model 182L
	Serial No. 18259080	Nationality and Registration Mark N42565
2. Owner	Name (As shown on registration certificate) B.J. & P. Inc.	
	Address (As shown on registration certificate) 1888 N.W. 92 Street Oklahoma City, OK 73405	
3. For FAA Use Only		
The data identified herein complies with the applicable airworthiness requirements and is approved for the above described aircraft, subject to conformity inspection by a person authorized by 14 CFR part 43, section 43.7		
SW-FSDO-23 District Office		
Date March 6, 1996		
Signature of FAA Inspector Johnny W. Malone		
4. Unit Identification		
Unit	Make	Model
AIRFRAME	(As described in item 1 above)	
POWERPLANT		
PROPELLER		
APPLIANCE	Type	
	Manufacturer	
5. Type		
6. Conformity Statement		
A. Agency's Name and Address	B. Kind of Agency	C. Certificate No.
Katy M. Johnson 411 Riverview Drive Norman, OK 72091	<input checked="" type="checkbox"/> U.S. Certificated Mechanic <input type="checkbox"/> Foreign Certificated Mechanic <input type="checkbox"/> Certificated Repair Station <input type="checkbox"/> Manufacturer	
D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.		
Date March 23, 1996	Signature of Authorized Individual Katy M. Johnson <i>Katy M. Johnson</i>	
7. Approval for Return To Service		
Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is: <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> REJECTED		
By	FAA P.I. Standards Inspector	Manufacturer
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	FAA Designee	Repair Station
	<input type="checkbox"/>	<input type="checkbox"/>
	Inspection Authorization	Person Approved by Transport Canada Repair Station Group
	<input type="checkbox"/>	<input type="checkbox"/>
Date of Approval or Rejection April 12, 1996	Certificate or Designation No. 233346566	Signature of Authorized Individual Mike J. Woodham

FAA Form 337(12-88)

Figure 8—FAA Form 337, Major Repair and Alteration (Airframe, Powerplant, Propeller, or Appliance). (Description of work accomplished on reverse side.)

7. 14 CFR section 91.207—Emergency Locator Transmitters (ELT).

14 CFR section 91.207 requires that no person may operate a U.S. registered civil airplane unless there is attached to the airplane a personal type or an automatic type emergency locator transmitter that is in operable condition and meets applicable requirements of TSO-C91. New ELT installations after June 21, 1995, must meet TSO-C91A.

NOTICE	
Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.	
a. Description of Work Accomplished (If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)	
<ol style="list-style-type: none"> Removed right wing from aircraft and removed skin from outer 6 feet. Repaired buckled spar 49 inches from tip in accordance with attached photographs and figure 1 of drawing dated March 23, 1996. Date: March 26, 1996. Inspected splice in Item 1 and found it to be in accordance with data indicated. Splice is okay to cover. Inspected internal wing assembly for hidden damage and condition. Mike J. Woodham, ASP 233346566 IA Primed interior wing structure and replaced skin P/N's 83-0085, 83-0086, and 83-0087B with same skin 2024-T3, .025 inches thick. Rivet size and spacing all the same as original and using procedures in Chapter 2, Section 3, of AC 43.13-1A, dated 1972. Replaced stringers as required and installed 6 splices as per attached drawing and photographs. Installed wing, rigged aileron, and operationally checked in accordance with manufacturer's maintenance manual. No change in weight or balance. 	
END	
Additional Sheets Are Attached	

Figure 9—FAA Form 337 (reverse side), Major Repair and Alteration (Airframe, Powerplant, Propeller, or Appliance).

Batteries used in ELT shall be replaced when:

- The transmitter has been in use for more than 1 cumulative hour, or
- 50 percent of the ELT's useful life has expired.

The expiration date for replacing the battery shall be legibly marked on the outside of the transmitter and entered in the aircraft maintenance records.

ADDITIONAL INFORMATION ON AIRCRAFT MAINTENANCE RECORDS

Your local FSDO can help you establish your aircraft maintenance program and the necessary maintenance records. Additional information relating to aircraft maintenance records can be obtained from:

- 14 CFR part 39** Airworthiness Directives

- 14 CFR part 43** Maintenance, Preventive Maintenance, and Alteration

- 14 CFR part 91** General Operating and Flight Rules

- AC 43-9** Maintenance Records: General Aviation Aircraft

These publications are available from U.S. Government Printing Office bookstores located throughout the United States. For more information about ordering these publications, refer to the section titled "Obtaining FAA Publications and Records." The publications also are available from commercial vendors.

Maintenance and recordkeeping similarities between type certificated aircraft and amateur-built aircraft are shown in the following chart:

Type Certificated/Amateur-Built Aircraft Comparison Chart		
Responsibility	Type Certificated Aircraft	Amateur-Built Aircraft
Registration	Yes	Yes
Annual inspection	Yes	Yes*
100-hour inspection	Yes**	No***
Compulsory insurance (most states)	No	No
Required maintenance records	Yes	Yes
Altimeter and static tests (IFR controlled airspace)	Yes	Yes
Transponder tests (if required by CFR's)	Yes	Yes
Emergency locator transmitter (ELT) (Except single seat aircraft)	Yes	Yes
Reporting of accidents	Yes	Yes

All recordkeeping is primarily the responsibility of the aircraft owner or operator. The A&P mechanic is responsible for the work he or she performs.

* Condition inspection for amateur-built aircraft.
 ** Only when aircraft is used for commercial operations.
 *** 100-hour inspection same as condition inspection.

SPECIAL FLIGHT PERMITS

A special flight permit is a Special Airworthiness Certificate, 14 CFR section 21.197, issued for an aircraft that may not currently meet applicable airworthiness requirements but is safe for a specific flight. [Figure 10] Before the permit is issued, an FAA inspector may personally inspect the aircraft or require it to be inspected by an FAA certificated A&P mechanic or repair station to determine its safety for the intended flight. The inspection is then recorded in the aircraft records.

Special flight permits are issued to allow the aircraft to be flown to a base where repairs,

alterations, or maintenance can be performed; for delivering or exporting the aircraft; or for evacuating an aircraft from an area of impending danger. They may also be issued to allow the operation of an overweight aircraft for flight beyond its normal range over water or land areas where adequate landing facilities or fuel are not available.

Should you have an occasion to need a special flight permit, you can obtain assistance and the necessary forms from the local FSDO. Refer to figures 11 and 12 for a sample of the special flight permit application form.

UNITED STATES OF AMERICA DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION SPECIAL AIRWORTHINESS CERTIFICATE			
A	CATEGORY/DESIGNATION		SPECIAL FLIGHT PERMIT
	PURPOSE		MAINTENANCE
B	MANUFACTURER	NAME	N/A
		ADDRESS	N/A
C	FLIGHT	FROM	SHAWNEE, OKLAHOMA
		TO	DOWNTOWN AIRPARK, OKLAHOMA CITY, OK
D	N - 42565		SERIAL NO. 182-582672
	BUILDER	CESSNA	MODEL C-182L
E	DATE OF ISSUANCE 03-22-99		EXPIRY 04-01-99
	OPERATING LIMITATIONS DATED 03-22-99 ARE A PART OF THIS CERTIFICATE		
	SIGNATURE OF FAA REPRESENTATIVE T. A. HOLLARS <i>T. A. Hollars</i>		DESIGNATION OR OFFICE NO. SW-FSDO-OKC
Any alteration, reproduction or misuse of this certificate may be punishable by a fine not exceeding \$1,000 or imprisonment not exceeding 3 years, or both. THIS CERTIFICATE MUST BE DISPLAYED IN THE AIRCRAFT IN ACCORDANCE WITH APPLICABLE FEDERAL AVIATION REGULATIONS.			

FAA Form 8130-7 (10/82)

REVERSE SIDE OF APPLICATION OF AIRWORTHINESS CERTIFICATE

Figure 10—FAA Form 8130-7, Special Airworthiness Certificate (reverse side-pink).

AIRWORTHINESS DIRECTIVES

A primary safety function of the FAA is to require correction of unsafe conditions found in an aircraft, aircraft engine, propeller, rotor, or appliance when such conditions exist or are likely to exist or develop in other products of the same design. The unsafe conditions can exist because of a design defect, maintenance, or other causes. 14 CFR part 39, Airworthiness Directives (AD's), defines the authority and responsibility of the FAA Administrator for requiring the necessary corrective action. AD's are used to notify aircraft owners and other interested persons of unsafe conditions and to specify the conditions under which the product may continue to be operated.



AD's may be divided into two categories:

1. Those of an emergency nature requiring immediate compliance before further flight, and
2. Those of a less urgent nature requiring compliance within a relatively longer period of time.

AD's are the “final rule” and shall be complied with unless specific exemption is granted. It is the aircraft owner's or operator's responsibility to ensure compliance with all pertinent AD's. This includes those AD's that require recurrent or continuing action. For example, an AD may require a repetitive inspection each 50 hours of operation, meaning the particular inspection shall be accomplished and recorded every 50 hours of time in service.

Owners/operators are reminded that there is no provision to overfly the maximum hour requirement of an AD unless it is specifically written into the AD. To help you determine if an AD applies to an amateur-built aircraft, contact your local FSDO.

14 CFR section 91.417 requires a record to be maintained that shows the current status of applicable AD's, including the method of compliance, the AD number and revision date, if recurring, the time and date when due again, the certified mechanic's signature, the kind of certificate, and the certificate number of the repair station or mechanic who performed the work. For ready reference, many aircraft owners have a chronological listing of the pertinent AD's in the back of their aircraft and engine records. [Figure 11]

The Summary of Airworthiness Directives contains all the valid AD's previously published. The AD's are divided into two categories: (1) Small Aircraft under 12,500 pound maximum certificated takeoff weight and Rotorcraft; and (2) Large Aircraft over 12,500 pounds. Both categories have three sets of books plus biweekly supplements. Each book may

be purchased separately in paper format or by subscription on paper or microfiche with biweekly supplements. Also all AD's—Small and Large Aircraft—may be purchased on CD-ROM with updates free on the Internet site <http://av-info.faa.gov/ad>.

AC 39-7, Airworthiness Directives, provides additional guidance and information for owners and operators of their responsibilities for complying with and recording AD's.

For more information contact:

Airworthiness Programs Branch, AFS-610
P.O. Box 26460
Oklahoma City, OK 73125
Telephone (405) 954-4103
Fax (405) 954-4104

AIRWORTHINESS DIRECTIVE COMPLIANCE RECORD								
AIRCRAFT <u>PA-22-135</u>			<u>N2631A</u>			<u>S/N 22-903</u>		
ENGINE <u>Lycoming 0-290-D2</u>						<u>S/N 4563-21</u>		
PROPELLER <u>Sensenich M 76AM2</u>						<u>S/N 6662</u>		
AD NUM. & AMEND. NUM.	REV. NUM. & DATE	SUBJECT	DATE/HOURS AT COMP.	METHOD OF COMP.	O N E T I M E	R E C U R R I N G	COMP. DUE DATE/HRS	AUTHORIZED SIGNATURE & NUMBER
76-07-12 39-3024	R-1 8-30-77	Bendix ignition switch	11-11-94 1850TT	Operational check and inspection		X	1900TT	<i>Phil Lomax</i> A&P 000000000
93-18-03 39-8688	Original 10-29-93	One-piece venturi	3-17-95 1850TT	Installed one-piece venturi Carb S/N BR-549	X			<i>Phil Lomax</i> A&P 000000000

Figure 13—Airworthiness Directive Compliance Record (suggested format).

THE SERVICE DIFFICULTY PROGRAM

The Service Difficulty Program provides for the exchange of service experience with aircraft and aircraft products to aid in the detection of mechanical problems. The incentive for early detection is to get a jump on corrective actions and ultimate solutions, thereby minimizing the effect of equipment failure on safety.

Aircraft owners, pilots, and mechanics are urged to report promptly all service problems, using FAA Form 8010-4, Malfunction or Defect Report, or any other form or format. Copies of these forms may be obtained free from any FSDO. No postage is required. [Figures 14 and 15] FAA Form 8010-4 is also available in electronic format on the internet. This version provides the advantage of electronic submission. The internet address is:
<http://www.mmac.jccbi.gov/alerts/index.html>

Each problem reported contributes to the improvement of aviation safety through the identification of a potential problem area and the alerting of other persons to it. This focusing of attention on a problem has led to improvements in the design and maintainability of aircraft and aircraft products.

How does reporting a problem help you? By pooling everyone's knowledge about a situation, we can detect mechanical problems early enough to correct them before they might possibly result in accidents/incidents. This should make flying safer, more enjoyable, and certainly less expensive.

AC 20-109, Service Difficulty Program (General Aviation), contains additional information on this program.

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION		OPER. Control No.		8. Comments Describe the malfunction or defect and the circumstances under which it occurred. State probable cause and recommendations to prevent recurrence.)	DISTRICT OFFICE	OPERATOR DESIGNATOR
MALFUNCTION OR DEFECT REPORT		ATA Code				
		1. A/C Reg. No.	N- 2033D			
Enter pertinent data		MANUFACTURER	MODEL/SERIES			
2	AIRCRAFT	Beechcraft	C-35	During a local flight, a fuel odor was apparent. Flight was terminated at the local airport with a normal landing. After engine shutdown and exiting the aircraft the pilot observed fuel leaking from the lower engine cowl. Investigation revealed an aluminum fuel pressure gauge line cracked at the B nut where it attached to a carburetor fitting (see attached drawing). Line appears to be original (40+yrs.). A combination of age and vibration may have caused the crack. Recommend checking line every 100 hrs. and replacing as necessary.	COMPUTER	FAA
3	POWERPLANT	Continental	E-225			
4	PROPELLER	Hartzell	HCA2U20 4A1			
5. SPECIFIC PART (of component) CAUSING TROUBLE				Optional Information:	MFG	AIR TAXI
Part Name	MFG. Model or Part No.	Serial No.	Part Defect Location			
Tube-fuel pressure	35-924126	N/A	B-nut Carb end	Check a box below if this report is related to an aircraft <input type="checkbox"/> Accident Date _____ <input type="checkbox"/> Incident Date _____	MECH	SUBMITTED BY Robert Kruse
6. APPLIANCE COMPONENT (Assembly that includes part)						
Comp Appl Name	Manufacturer	Model or Part No.	Serial number	TELEPHONE NUMBER (405) 555-6275	OPER	
N/A	N/A	N/A	N/A			
Part TT	Part TSO	Part Condition	7. Date Sub.			
4100	N/A	Cracked	12-12-94			

FAA Form 8010-4(10-92) SUPERSEDES PREVIOUS EDITIONS

Figure 14—FAA Form 8010-4, Malfunction or Defect Report.

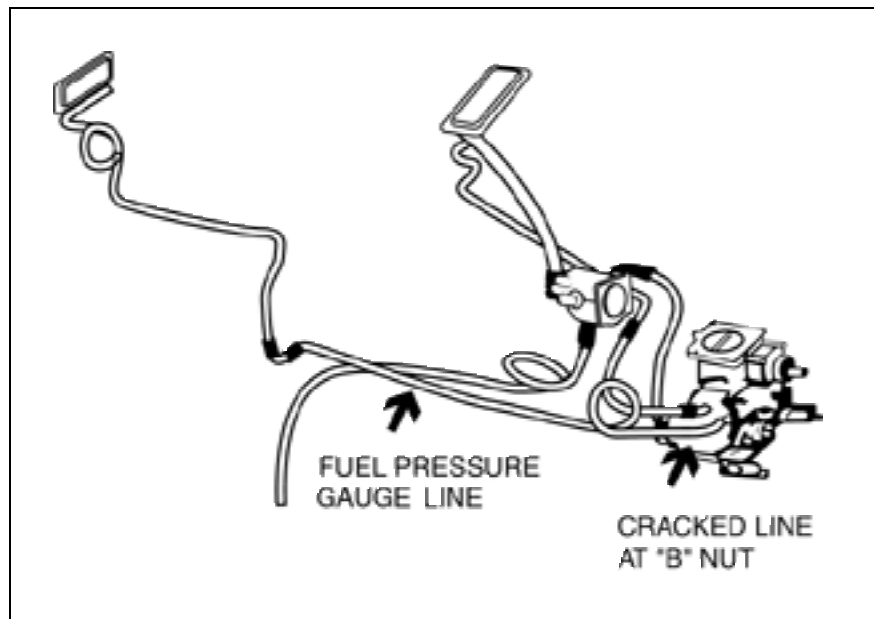


Figure 15—Attachment FAA Form 8010-4, Malfunction or Defect Report.

MAINTENANCE ALERTS

The FAA publishes AC 43-16A, Aviation Maintenance Alerts, monthly to provide the aviation community with a means for interchanging service difficulty information. The articles contained in the Alerts are derived from the Malfunction or Defect Reports submitted by aircraft owners, pilots, mechanics, repair stations, and air taxi operators.

Maintenance specialists review the reports and select pertinent items for publication in the Alerts. The information is brief and advisory; compliance

is not mandatory. It is, however, intended to alert you to service experience and, when pertinent, direct your attention to the manufacturer's recommended corrective action.

The Alerts are distributed by the Government Printing Office (GPO). To subscribe, complete the order form, enclose your payment, and send to the address indicated on the form. The Internet version of the Alerts is free of charge; the address is <http://www.mmac.jccbi.gov/alerts>.

SUBSCRIPTION FORM

ADVISORY CIRCULAR 43-16A, AVIATION MAINTENANCE ALERTS

This publication is once again available in printed form.

In the December issue of the Alerts, we informed readers of the decision to discontinue printing the Alerts. The decision was a difficult one to make, and we have heard from many of our readers. There is good news on the horizon.

The Superintendent of Documents, Government Printing Office (GPO), has agreed to distribute the Alerts for a subscription fee. The subscription charge will be \$25 yearly for domestic mailings and \$31.25 for foreign mailings.

To receive a monthly copy of the Alerts, please fill out the attached form and send it to the address indicated below with your payment.

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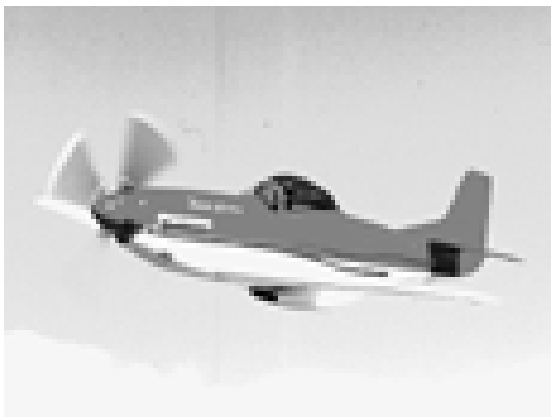
OBTAINING FAA PUBLICATIONS AND RECORDS

ADVISORY CIRCULARS

Advisory circulars are issued by the FAA to inform the aviation public, in a systematic way, of nonregulatory material of interest. The contents of advisory circulars are not binding on the public unless incorporated into a regulation by reference.

AC 00-2, Advisory Circular Checklist, contains a list of current FAA advisory circulars and provides detailed instructions on how to obtain them. It also contains a list of U.S. Government Printing Office bookstores located throughout the United States that stock many Government publications. This advisory circular may be accessed from the following web site.

www2.faa.gov/aba/html_policies/ac00_2.html



CODE OF FEDERAL REGULATIONS

The following regulations are those you may be most interested in reading. They pertain primarily to the operation and maintenance of the aircraft and to obtaining a pilot certificate or an A&P mechanic certificate:

- 14 CFR part 1 Definitions and Abbreviations
- 14 CFR part 21 Certification Procedures for Products and Parts
- 14 CFR part 23 Airworthiness Standards: Normal, Utility, and Acrobatic Category Aircraft and Commuter Category Airplanes
- 14 CFR part 33 Airworthiness Standards: Aircraft Engines
- 14 CFR part 35 Airworthiness Standards: Propellers
- 14 CFR part 39 Airworthiness Directives
- 14 CFR part 43 Maintenance, Preventive Maintenance, Rebuilding, and Alteration
- 14 CFR part 45 Identification and Registration Marking
- 14 CFR part 47 Aircraft Registration
- 14 CFR part 49 Recording of Aircraft Titles and Security Documents
- 14 CFR part 61 Certification: Pilots and Flight Instructors
- 14 CFR part 65 Certification: Airmen Other than Flight Crewmembers
- 14 CFR part 91 General Operating and Flight Rules

AC 00-44, Status of Federal Aviation Regulations, contains the current status of the CFR's, including changes issued, price list, and ordering instructions. This advisory circular may be obtained free upon request from:

U.S. Department of Transportation
Subsequent Distribution Office (SVC 121.23)
Ardmore East Business Center
3341 Q 75th Avenue
Landover, MD 20785
Fax (301) 386-5394

RECORDS

If you become an aircraft owner, pilot, or certificated mechanic, you may, at some time, need to obtain copies of documents pertaining to your aircraft, airman, or medical certification.

Documents pertaining to aircraft can be requested from:

Federal Aviation Administration
Civil Aviation Registry, AFS-750
P.O. Box 25504
Oklahoma City, OK 73125
(405) 954-3116

If your pilot certificate is lost, destroyed, or mutilated, you may obtain a replacement certificate by sending a written request with your name, permanent mailing address, social security number, date and place of birth, and any additional information, such as type of certificate and certificate number, with a check or money order for \$2 to:

Federal Aviation Administration
Civil Aviation Registry, AFS-760
P.O. Box 25082
Oklahoma City, OK 73125

If it becomes necessary to fly before a replacement certificate arrives, you may obtain a fax confirming your pilot status, which is valid for up to 60 days, from the Airman Certification Branch at (405) 954-3261.

Medical records are available from:

Federal Aviation Administration
Aeromedical Certification Branch, AAM-331
P.O. Box 26080
Oklahoma City, OK 73126-5063

If your medical certificate is lost, destroyed, or mutilated, you may obtain a replacement certificate by sending a written request with your signature, birth date, social security number, and a check or money order for \$2 to:

Federal Aviation Administration
AMZ-300
P.O. Box 25770
Oklahoma City, OK 73125-4915

If it becomes necessary to fly before a replacement certificate arrives, you may obtain a fax confirming your medical status, which is valid for up to 60 days, from the Aeromedical Certification Branch at (405) 954-4821.

Fees for furnishing copies of paper records are \$2 for the search, \$0.25 for a copy of the first page, \$0.05 for a copy of the second page and each additional page; \$0.15 for each microfiche (for microfiched records); \$3 for certification of copies as duplicates of the original records; \$2 for duplicate aircraft registration or airman certification or medical certificate; and \$5 for certification of a diligent search for all possible sources of information.

Fees, which are subject to change, may be paid by check, draft, or postal money order, payable to the Treasury of the United States. Send your request to the proper branch. If a prospective owner has

reason to believe that an aircraft has been previously destroyed or demolished and has been rebuilt or restored, contact:

Civil Aviation Registry, AFS-750
P.O. Box 25504
Oklahoma City, OK 73125

They may have documentation if the aircraft was reported to the FAA as destroyed or demolished. The aircraft records may be requested for review at the above address.

For the current phone number of the FSDO in your area, check your local telephone directory under the section of United States Government Offices, Department of Transportation, Federal Aviation Administration, and Flight Standards District Office. If the responsibility for your locality is not with that office, you will be advised about which office to contact.