

(d) *What actions must I accomplish to address this problem?* To address this problem, you must accomplish the following:

Action	Compliance time	Procedures
(1) For airplanes with any MLG inboard door hinge assembly that is Piper part number 47529-32 (or FAA-approved equivalent part number), accomplish the following: (i) Inspect all hinges and hinge attachment angles in the MLG inboard door hinge assembly; and (ii) Replace any cracked MLG inboard door hinge assembly with a Piper part number 47529-32 assembly (or FAA-approved equivalent part number)	Inspect upon accumulating 2,000 hours time-in-service (TIS) on the MLG inboard door hinge assembly or within the next 100 hours TIS after January 19, 2001 (the effective date of this AD), whichever occurs later; and thereafter at intervals not to exceed 2,000 hours TIS. Accomplish the replacement, if necessary, prior to further flight after the inspection	Accomplish in accordance with the INSTRUCTIONS section of Piper Service Bulletin No. 682, dated July 24, 1980
(2) For airplanes with any aluminum MLG inboard door hinge assembly that is not Piper part number 47529-32 (or FAA-approved equivalent part number) or any assembly that is not made of steel, accomplish the following: (i) Inspect all hinges and hinge attachment angles in the MLG inboard door hinge assembly; and (ii) Replace any cracked MLG inboard door hinge assembly with a Piper part number 47529-32 assembly (or FAA-approved equivalent part number)	Inspect at the next inspection required by AD 80-26-05 or within the next 100 hours time-in-service (TIS) after January 19, 2001 (the effective date of this AD), whichever occurs first, and thereafter at intervals not to exceed 100 hours TIS. Accomplish the replacement, if necessary, prior to further flight after the inspection where the cracked assembly was found	Accomplish in accordance with the INSTRUCTIONS section of Piper Service Bulletin No. 682, dated July 24, 1980.

(e) *Can I comply with this AD in any other way?*

(1) You may use an alternative method of compliance or adjust the compliance time if:

(i) Your alternative method of compliance provides an equivalent level of safety; and

(ii) The Manager, Atlanta Aircraft Certification Office (ACO), approves your alternative. Submit your request through an FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Atlanta ACO.

(2) Alternative methods of compliance approved in accordance with AD 80-26-05 (superseded by this action) are not considered approved as alternative methods of compliance with this AD.

Note 2: This AD applies to each airplane identified in paragraph (a) of this AD, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (e) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if you have not eliminated the unsafe condition, specific actions you propose to address it.

(f) *Where can I get information about any already-approved alternative methods of compliance?* Contact William O. Herderich, Aerospace Engineer, FAA, Atlanta Aircraft Certification Office, One Crown Center, 1895 Phoenix Boulevard, suite 450, Atlanta, Georgia 30349; telephone: (770) 703-6082;

facsimile: (770) 703-6097; e-mail: william.o.herderich@faa.gov.

(g) *What if I need to fly the airplane to another location to comply with this AD?* The FAA can issue a special flight permit under sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate your airplane to a location where you can accomplish the requirements of this AD

(h) *Are any service bulletins incorporated into this AD by reference?* Actions required by this AD must be done in accordance with Piper Service Bulletin No. 682, dated July 24, 1980. The Director of the Federal Register approved this incorporation by reference under 5 U.S.C. 552(a) and 1 CFR part 51. You can get copies from The New Piper Aircraft, Inc., Customer Service, 2926 Piper Drive, Vero Beach, Florida 32960. You can look at copies at FAA, Central Region, Office of the Regional Counsel, 901 Locust, Room 506, Kansas City, Missouri, or at the Office of the Federal Register, 800 North Capitol Street, NW, suite 700, Washington, DC.

(i) *Does this AD action affect any existing AD actions?* This amendment supersedes AD 80-26-05, Amendment 39-3994.

(j) *When does this amendment become effective?* This amendment becomes effective on January 19, 2001.

Issued in Kansas City, Missouri, on November 30, 2000.

William J. Timberlake,

Acting Manager, Small Airplane Directorate, Aircraft Certification Service.

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 98-CE-121-AD; Amendment 39-12036; AD 2000-25-02]

RIN 2120-AA64

Airworthiness Directives; American Champion Aircraft Corporation 7, 8, and 11 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment supersedes Airworthiness Directive (AD) 98-05-04, which currently requires you to repetitively inspect the front and rear wood spars for damage (including installing any as-needed inspection holes) and repair or replace any damaged wood spar on certain American Champion Aircraft Corporation (ACAC) Model 8GCBC airplanes. Damage is defined as cracks, compression cracks, longitudinal cracks through the bolt holes or nail holes, or loose or missing nails. This AD retains the actions of AD 98-05-04 for the ACAC Model 8GCBC airplanes; extends the actions to all ACAC 7, 8, and 11 series airplanes (except the inspections are not repetitive for certain 7 and 11 series airplanes); incorporates

alternative methods of accomplishing the actions; and requires reporting any damage found. This AD is the result of a review of the service history of the affected airplanes that incorporate wood wing spars where damage was found in this area and consideration of all public comments received. The actions specified by this AD are intended to detect and repair or replace damaged wood wing spars. Continued operation with such damage could progress to in-flight structural failure of the wing with consequent loss of control of the airplane.

DATES: This amendment becomes effective on January 19, 2001.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulation as of January 19, 2001.

ADDRESSES: You may get service information referenced in this AD from the American Champion Aircraft Corporation, P.O. Box 37, 32032 Washington Avenue, Highway D, Rochester, Wisconsin 53167; internet address:

www.amerchampionaircraft.com. You may examine this information at the Federal Aviation Administration (FAA), Central Region, Office of the Regional Counsel, Attention: Rules Docket No. 98-CE-121-AD, Room 1558, 601 E. 12th Street, Kansas City, Missouri 64106; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Mr. William Rohder, Aerospace Engineer, FAA, Chicago Aircraft Certification Office, 2300 E. Devon Avenue, Des Plaines, Illinois 60018; telephone: (847) 294-7697; facsimile: (847) 294-7834.

SUPPLEMENTARY INFORMATION:

Discussion

What prior AD action did FAA take on this subject? A review of the service history of ACAC 7, 8, and 11 series airplanes that incorporate wood wing spars caused FAA to initiate AD rulemaking action. In-flight wing structural failures on ACAC Model 8GCBC airplanes and several incidents and accidents on other affected airplane models where damage was found on the front and rear wood spars prompted this review. Those rulemaking actions are:

—AD 98-05-04, Amendment 39-10365 (63 FR 10297, March 3, 1998), which applies to ACAC Model 8GCBC airplanes, and requires you to accomplish the following: (1) inspect (repetitively) the front and rear wood spars for damage (including installing any necessary inspection holes); and

(2) repair or replace any damaged wood spar; and
—a notice of proposed rulemaking (NPRM) (Docket No. 97-CE-79-AD) that, if followed by a final rule, would have required the same actions as AD 98-05-04 on all ACAC 7, 8, and 11 series airplanes (excluding the Model 8GCBC airplanes). This NPRM was published in the **Federal Register** on November 3, 1997 (62 FR 59310).

What is the potential impact if FAA took no action? Continued operation with such cracks and damage could progress to in-flight structural failure of the wing with consequent loss of the airplane.

Did we receive comments on the NPRM (Docket No. 97-CE-79-AD)? The FAA encouraged interested persons to participate in the rulemaking aspects of this subject. We received numerous comments on the NPRM (Docket No. 97-CE-79-AD). Many of these comments proposed that we combine the actions of the NPRM and AD 98-05-04 into one AD that would affect all ACAC 7, 8, and 11 series airplanes and incorporate recommended alternative methods for complying with the actions. Based on these comments, FAA:

—Withdrew the NPRM Docket No. 97-CE-79-AD (64 FR 29969, June 4, 1999); and
—Issued an NPRM that proposed to supersede AD 98-05-04 with a new AD that would combine the actions of AD 98-05-04 and Docket No. 97-CE-79-AD; and incorporate recommended alternative methods for complying with those actions. This NPRM was published in the **Federal Register** on June 4, 1999 (64 FR 29972).

Accomplishment of the proposed inspection as specified in the NPRM would be required in accordance with ACAC Service Letter 406, Revision A, dated May 6, 1998.

Was the public invited to comment on the NPRM? The FAA encouraged interested persons to participate in the making of this amendment. At the request of several commenters, FAA reopened the comment period for the NPRM on July 29, 1999. This action was published in the **Federal Register** on August 4, 1999 (64 FR 42297). A summary of the comments on both the original NPRM and the reopening of the comment period follow, along with FAA's responses.

Comment Issue No. 1: Extend the Comment Period to 60 Days

What is the commenters' concern? Several commenters request an extension to the comment period in

order to have more time to provide information on the proposed rule.

What is FAA's response to the concern? As discussed previously, FAA reopened the comment period to give the public an additional 30 days to respond.

We are not changing the final rule as a result of these comments.

Comment Issue No. 2: Only Require a One-Time Inspection for Certain 7 and 11 Series Airplanes

What is the commenters' concern? Numerous commenters agree with the AD pertaining to ACAC airplane models. However, the commenters state that certain lightweight 7 and 11 series airplanes with low horsepower engines should only be subject to a one-time spar inspection because they are not certificated for aerobatic flight and are not subjected to the same operations as the heavier high horsepower airplanes.

What is FAA's response to the concern? The FAA has determined that wing damage incidents are the major cause of compression cracks and other spar damage in low horsepower and lightweight airplanes. Therefore, a one-time inspection is acceptable for ACAC Models 7AC, 7ACA, S7AC, 7BCM (L-16A), 7CCM (L-16BA), S7CCM, 7DC, S7DC, 7EC, S7EC, 7FC, 7JC, 11AC, S11AC, 11BC, S11BC, 11CC, and S11CC airplanes. These airplanes have engines that are 90 horsepower and lower (includes 60- to 90-horsepower engines). You must repetitively inspect airplanes that are modified with engines greater than 90 horsepower.

You must also accomplish the inspection any time one of the affected airplanes is involved in any accident or incident where the wing is involved.

We are changing the final rule AD to only require an initial inspection on certain ACAC 7 and 11 series airplanes, with any subsequent inspections required for any affected airplane involved in an incident/accident (that happens after the effective date of this AD) where wing damage occurs (e.g., surface deformations such as abrasions, gouges, scratches, or dents, etc.).

Comment Issue No. 3: Exclude Certain Airplanes From the Proposed AD

What is the commenters' concern? Numerous commenters request that FAA remove lightweight and low horsepower airplanes from the Applicability of the AD. The commenters state that these airplanes are not certificated for aerobatic operation and, therefore, do not receive the stress levels in the spar that caused the need for this AD.

What is FAA's response to the concern? We do not concur that these lightweight and low horsepower airplanes should be removed from the AD. We have received compression crack and spar damage reports on lightweight and low horsepower airplane models (*i.e.*, Model 7AC). The following is a synopsis from a service difficulty report (SDR) for a Model 7AC airplane:

During annual inspection, found rear spar right wing cracked across width of spar outboard rear strut attach point next to doubler. Defect was found using an inspection mirror and strong light through an inspection hole. The removal of fabric material on the bottom of the wing in the area of suspicion verified the defect. Submitter suggests immediate inspection of all Aeronca Champ 7AC aircraft both on the top and bottom of the aft wing strut spar attach points outboard.

This information caused us to propose (in the NPRM) a requirement for submitting all findings of airplane wing damage. You can accomplish this by describing the damage in a Malfunction or Defect Report (M or D), FAA Form 8010-4, and sending a copy of the report to the Chicago Aircraft Certification Office. (You may submit M or D reports electronically through the FAA AFS-600 web page at <http://www.mmac.jcabi.gov/afs/afs600>. Because you will lose access to the report once you electronically submit it, we recommend that you print two copies prior to submitting the report and forward one to the Chicago ACO and keep the other for your records). We will evaluate the data as it is received and initiate further rulemaking action, if necessary.

We are not changing the AD based on these comments. However, as discussed in the previous comment, the AD will only require an initial inspection on the airplanes equipped with low horsepower engines. Subsequent inspections are required for any affected airplane involved in an incident/accident (that happens after the effective date of this AD) where wing damage occurs (*e.g.*, surface deformations such as abrasions, gouges, scratches, or dents, etc.).

Comment Issue No. 4: The AD Should Only Apply to Aerobatic Aircraft

What is the commenters' concern? Two commenters state that spar damage is a direct result of aerobatic flight. The commenters suggest that FAA change the proposal to affect only aircraft certificated for aerobatic activity.

What is FAA's response to the concern? We do not concur. Reports indicate that spar damage occurs on low

horsepower airplane models that are not certificated for aerobatic flight. We have determined that wing damage incidents are the primary cause of compression cracks on the lower horsepower airplanes.

We are not changing the AD based on these comments.

Comment Issue No. 5: Exclude Airplanes With Damaged Spars That Can Still Support the Required Load

What is the commenter's concern? One commenter requests that FAA exclude airplanes from the Applicability of the AD if any wing with a compression crack can still pass testing to 150-percent of design limit load.

What is FAA's response to the concern? We do not concur. Compression cracked test spar specimens may not represent wood spars where compression cracks occur randomly along the spar length. The only assurance that the specimen was in a "Pass" condition was if the specimen's compression crack was identical to that of a failed spar. All compression cracks are not identical. Even slight compression cracks may seriously reduce the strength of the material. The approved type design of the affected airplanes does not allow cracked spars.

We are not changing the AD based on these comments.

Comment Issue No. 6: Properly Performed Annual Inspections are Sufficient

What is the commenters' concern? Several commenters state that, if you accomplish a proper annual inspection, then there is no need for this AD. These commenters state that the required maintenance programs provide the procedures to detect spar damage. These commenters also state that part 43 of the Federal Aviation Regulations (14 CFR part 43) requires inspection of the wing spars.

What is FAA's response to the concerns? We concur that maintenance manuals for the ACAC 7, 8, and 11 series airplanes and part 43 of the Federal Aviation Regulations (14 CFR part 43) specify inspecting the wing spars for cracks during annual and 100-hour inspections, particularly at the butt ends and strut attach points. However, this existing guidance does not provide instructions for sufficiently accessing the spar or identifying damage. For example, compression cracks appear as barely visible, minute, and jagged series of lines that run across the grain on the top or bottom of the spar. If not viewed with detailed instructions and the proper equipment, you could overlook

them. SDR's submitted since the issuance of AD 98-05-04 have confirmed the importance of inspecting the wing spars in accordance with ACAC Service Letter 406, Revision A, dated May 6, 1998. We can only require compliance with service information through AD action.

We are not changing the AD based on these comments.

Comment Issue No. 7: Exempt Airplanes With Wings That Were Recently Rebuilt

What is the commenters' concern? Two commenters request that FAA exempt from the AD airplanes where the wing spars were recently inspected and found to be free of damage or where the spars were replaced.

What is FAA's response to the concern? We do not concur. To adequately inspect the wing spars for cracks and compression cracks, you must utilize the detailed inspection procedures in ACAC Service Letter 406, Revision A, dated May 6, 1998 (or procedures approved by FAA). Information available to FAA reveals that mechanics have overlooked compression cracks when not following these procedures.

We are not changing the AD based on these comments.

Comment Issue No. 8: Eliminate, Minimize, or Provide Alternatives to Installing Top Inspection Covers

What is the commenters' concerns? Several commenters request that FAA remove from this AD the option of installing inspection covers on the top surface of the wings of the ACAC 7, 8, and 11 series airplanes. Specific concerns are as follows:

1. Top wing inspection covers could leak, cause water damage to the spar, and result in structural degradation of the wing;
2. Top wing inspection covers could come off during flight due to the negative pressure on the top surface, and result in wing damage; and
3. Top wing inspection covers will cause aerodynamic and performance concerns.

What is FAA's response to the concerns? We do not concur with removing the option of installing top inspection covers from the AD. ACAC Service Letter 406, Revision A, dated May 6, 1998, allows the mechanic to utilize a variety of procedures and techniques (including the installation of top inspection covers) to perform a thorough inspection depending on his/her experience, equipment, and the aircraft configuration without mandating a specific number, type, or

location of inspection holes/covers. The service information only specifies the installation of additional FAA-approved holes/covers as needed to accomplish a thorough spar inspection. The mechanic performing the inspection is in the best position to determine the minimum number, type, and location of inspection holes/covers needed to accomplish a thorough spar inspection. We also do not concur that the installation of these covers will cause other safety concerns. Our response to each specific concern is as follows:

1. Water damage to the spar: The manufacturer designed and tested an FAA-approved watertight seal for the as-needed wing inspection cover installation. This minimizes the potential for water damage.

2. Wing damage: The manufacturer designed the covers specifically to not cause damage to the reinforced cutout if the eight screws that attach the covers are inadvertently left off or not tightened, and the covers come off the airplane. Testing indicates that the covers easily flip backward off the wing if all screws are omitted.

3. Aerodynamic and performance concerns: FAA flight test personnel have evaluated these as-needed top inspection covers. As of the issuance of this document, we have not received any reports of decreased performance or service difficulty reports concerning any of the over 200 sets (400 inspection covers) that have already been delivered to the field.

We are not changing the AD based on these comments.

Comment Issue No. 9: Require the Installation of Top Inspection Covers

What is the commenter's concern?

One commenter requests that we not require the mechanics to inspect with a high intensity light source and mirrors. The commenter states that compression cracks are extremely difficult to detect and are easily overlooked.

The commenter also states that the initial inspection method described in ACAC Service Letter 406, Revision A, dated May 6, 1998, is inadequate and the best way to detect compression cracks is by removing a section of the leading edge and looking directly at the top of the spar. This commenter suggests requiring the installation of FAA-approved inspection holes/covers that are better situated on top of the wing than the holes/covers referenced in ACAC Service Letter 417, Revision C, dated May 6, 1998.

What is FAA's response to the concern? ACAC Service Letter 406, Revision A, dated May 6, 1998, allows the mechanic to utilize a variety of

procedures and techniques to perform a thorough inspection depending on his/her experience, equipment, and the aircraft configuration without mandating a specific number, type and/or location of inspection holes/covers. The service information only specifies the installation of additional FAA-approved holes/covers as needed to accomplish a thorough spar inspection. The mechanic performing the inspection is in the best position to determine the type, number, and location of inspection holes/covers needed to accomplish a thorough spar inspection.

Mechanics utilizing ACAC Service Letter 406, Revision A, dated May 6, 1998, have detected compression cracks on the wing spars that were not detected during previous annual inspections. We have determined that the procedures in the service letter, as proposed in the NPRM, provide sufficient information to detect compression cracks in the wing spars of ACAC 7, 8, and 11 series airplanes.

We are not changing the AD based on these comments.

Comment Issue No. 10: Cost Impact Is Too Low

What is the commenter's concern?

One commenter believes that the cost of installing inspection covers will be significantly greater than we estimated in the NPRM. We infer that the commenter is referring to the additional costs associated with cosmetic paint refinishing costs after the installation of any needed inspection holes/covers.

What is FAA's response to the concern? The cost impact of this AD reflects 11 as-needed inspection holes installed in the bottom of each wing (a total of 22) and 2 as-needed inspection holes/covers installed in the top of each wing. The decision on the number and location of any as-needed inspection holes/covers is at the discretion of the inspector in order to adequately inspect the entire surface of both wing spars.

Cosmetic considerations are not reflected. If you utilize the alternative inspection method referenced in ACAC Service Letter 406, Revision A, dated May 6, 1998, the number of as-needed inspection holes/covers would be reduced. This would further reduce the cost impact of this AD.

We are not changing the AD based on these comments.

Comment Issue No. 11: Provide Additional Inspection Guidance to Service Letter 406A and/or Require Additional Training for Inspectors

What is the commenters' concern?

Five commenters state that compression

cracks are extremely difficult to detect and are easily overlooked. Because of this, the commenters believe that FAA should:

- Include additional guidance to the AD to assure a thorough inspection is performed; and
- Require mechanics to obtain additional training in the detection of compression cracks on ACAC 7, 8, and 11 series airplanes.

What is FAA's response to the concerns? We concur that the compression cracks are difficult to detect and mechanics could easily overlook them if they are not experienced in detecting damage specific to wood structure. ACAC Service Letter 406, Revision A, dated May 6, 1998, contains a detailed description of compression cracks. This service letter also:

- Includes a recommendation that mechanics should have previous compression crack detection experience to perform certain methods of inspection; and
- Allows the mechanic to utilize different procedures and techniques to perform a thorough inspection depending on his/her experience, equipment, and the aircraft configuration without mandating a specific number, type, and/or location of inspection holes/covers.

Mechanics have detected compression cracks in aircraft while utilizing ACAC Service Letter 406, Revision A, dated May 6, 1998. We have determined that the procedures in the service letter, as proposed in the NPRM, provide sufficient information to detect compression cracks in the wing spars of ACAC 7, 8, and 11 series airplanes.

We are not changing the AD based on these comments.

Comment Issue No. 12: Proposed Inspection Is Too Broad.

What is the commenters' concern?

Two commenters suggest that FAA narrow the areas of inspection for compression cracks. These commenters state that this will not affect the inspection results.

What is FAA's response to the concern? We do not concur. The Inspection: (Bottom/Top) section of ACAC Service Letter 406, Revision A, contains the following:

Both front and rear spars need to be inspected. The key areas to be concerned with are shown in figure 1.

Figure 1 of this service letter depicts an isolated area that requires inspection of the top and bottom surfaces of the spar (near the strut attachments). The service

letter only includes procedures for the installation of top inspection covers in this area for the front spar. However, as stated as a warning in the service letter, loose rib nails may indicate compression cracks behind the rib flanges and you need to inspect these.

Compression cracks have been detected in locations other than the strut attachment area. The forward or aft face of the spar needs to be inspected for indication of damage. This position has also been supported by an SDR on an ACAC Model 7GCBC airplane on the aft spar. This SDR contains the following information:

Subject spar indicated irregular lines across the grain at 163 inches from the root end. Fore and aft spar faces cleaned and sanded & the vertical lines remained. Pressure applied to the spar each side indicated slight movement. A hard downward pressure force caused the spar to crack along the apparent fault lines. Submitter enclosed a copy of the page taken from the wood encyclopedia, which describes compression failures in wood. Submitter suggests that this could have been caused by ground contact of the wing tip, sometime in the aircraft's history.

We also have received photos of a badly cracked front spar from an ACAC Model 7GCAA airplane. This compression crack occurred just outboard of the first rib outboard and adjacent to the fuel tank bay and it extended 2/3 upward from the bottom of the spar. The report specifies that the aircraft had just over 500 hours time-in-service (TIS).

We are not changing the AD based on these comments.

Comment Issue No. 13: Improper Wing Rigging Causes Many Compression Cracks

What is the commenter's concern? One commenter believes improper rigging of the aircraft wings causes many compression cracks. This commenter requests additional service information.

What is FAA's response to the concern? While FAA agrees that improper rigging could lead to compression cracks, all information available to us indicates the problem does not result from improper rigging alone. The reporting requirement in the AD will allow us to continue to collect data and investigate the cause of compression cracks and other reported damage. We may initiate further rulemaking action on this subject based on the information received.

We are always open for groups such as the manufacturer and type clubs to work together to come up with valuable information, such as standardized rigging criteria and procedures.

We are not changing the AD based on these comments.

Comment Issue No. 14: Change the Wording in the AD

What is the commenters' concern? Two commenters suggest that the phrase "to prevent possible compression cracks and other * * *" that is included in the NPRM be changed to read "to detect possible compression cracks and other * * *"

What is FAA's response to the concern? We concur that the word detect should be added. We are changing this part of the final rule AD to read:

* * * to detect and repair or replace damaged wood wing spars. Continued operation with such damage could progress to in-flight structural failure of the wing with consequent loss of control of the airplane.

Comment Issue No. 15: Use Carbon Tetrachloride in the Compression Crack Inspection Method

What is the commenter's concern? One commenter states that use of carbon tetrachloride would improve the compression crack inspection method.

What is FAA's response to the concern? The FAA agrees that the use of carbon tetrachloride may enhance the inspection of unvarnished wood and may have limited benefit if used on varnished spars. However, the Environmental Protection Agency (EPA) has classified carbon tetrachloride as a carcinogen. Health concerns and the availability of this substance prevent us from requiring its use through this AD.

If desired, the application of any commercially-available "light weight" (not thick or viscous) wood stain instead of carbon tetrachloride may enhance the inspection process.

We obtained this information from the Forest Products Laboratory, which is a unit of the research organization of the Forest Service, U.S. Department of Agriculture.

We have determined that the application of a high intensity light source directly on the varnished surface, as specified in Service Letter 406, Revision A, dated May 6, 1998, adequately highlights compression cracks.

We are not changing the AD based on these comments.

Comment Issue No. 16: Only Require Inspection During Fabric Recovering

What is the commenters' concern? Two commenters suggest that FAA only require inspection during fabric recovering. These commenters state that this should be adequate to detect wing spar damage.

What is FAA's response to the concern? The FAA does not concur. Information tells us differently. For example, Advisory Circular (AC) 43.13-1B, paragraph 2.2.a., contains the following:

Polyester fabric deteriorates only by exposure to ultraviolet radiation as used in aircraft covering environment. When coatings completely cover the fabric, its service life is infinite.

Therefore, the special instructions contained in ACAC Service Letter 406, Revision A, dated May 6, 1998, are required to identify certain types of damage that may occur in the span of 10, 20, or more years of service. Additionally, the above-referenced AC also specifies "Therefore, it is very important to * * * provide adequate inspection access to all areas of (man-made) fabric covered components * * *"

We are not changing the AD based on these comments.

Comment Issue No. 17: Preflight of Aircraft Should Include Wing Flexing

What is the commenter's concern? One commenter states that he was taught to always "jack the wings back and forth" during the preflight inspection. The commenter recommends we consider adding this preflight technique to the AD. Since the commenter did not elaborate on the reason for this technique, we infer that the commenter believes this technique will help to audibly detect wing spar damage.

What is FAA's response to the concern? The FAA does not concur. This technique may not detect most types of damage and may actually initiate damage if performed too aggressively.

We are not changing the AD based on these comments.

The FAA's Determination and an Explanation of the Provisions of the AD

What have we decided? After careful review of all available information related to the subject presented above, including the above-referenced comments, FAA has determined that:

- Air safety and the public interest require the adoption of the rule as proposed except for the changes described in the above comment disposition and minor editorial corrections; and
- These changes and minor corrections will not add any additional burden upon the public than was already proposed.

What does this AD require? This AD retains the inspection and repair or

replacement requirements of AD 98-05-04 for the ACAC Model 8GCBC airplanes; extends all these actions to all ACAC 7, 8, and 11 series airplanes, except the inspections are not repetitive for certain 7 and 11 series airplanes; requires that all damage be reported to FAA; and incorporates alternative methods of accomplishing certain actions.

Why is the compliance time in calendar time instead of hours time-in-service? The compliance time of this AD is presented in calendar time and TIS. We are utilizing repetitive inspection compliance times that will coincide with the owner's/operator's annual inspection program. This should have the least impact upon operators because the costs of having the airplane out of service can be absorbed with regularly scheduled down-time.

To assure that compression cracks do not go undetected in the wood spars of the affected airplanes, we are using the following compliance times:

1. The initial inspection at the first annual inspection that occurs 30 calendar days or more after the effective date of the AD or within 13 calendar months after the effective date of the AD, whichever occurs later; and

2. The repetitive inspections (for those airplanes affected) thereafter at intervals not to exceed 12 calendar months or 500 hours TIS, whichever occurs first.

Cost Impact

How did we determine the cost impact of this AD? The following cost analysis is based on the presumption that 26 as-needed inspection holes/covers (11 per wing on the bottom surface and 2 per wing on the top surface) will be installed on each affected airplane, in order to complete a thorough inspection in accordance with ACAC Service Letter 406, Revision A, dated May 6, 1998. All of these inspection holes/covers may not be needed, which will reduce the cost impact upon U.S. operators of the affected airplanes.

How many airplanes are impacted by this AD? The FAA estimates that 6,701 airplanes in the U.S. registry will be affected by this AD.

What is the cost impact of the initial inspection on owners/operators of the affected airplanes? We estimate that it will take approximately 6 workhours (Installations: 5 workhours; Initial Inspection: 1 workhour) per airplane to accomplish this action, and that the average labor rate is approximately \$60 an hour. Parts cost approximately \$292 per airplane, provided that each

airplane will have 11 as-needed standard inspection holes/covers per wing bottom surface and 2 as-needed inspection holes/covers per wing top surface (total of 26 new covers per airplane) installed. If the airplane needs more inspection covers installed (e.g., a result of previous non-factory wing recover work), the cost could be slightly higher. Based on these figures, the total cost impact of this AD on U.S. operators is estimated to be \$4,369,052, or \$652 per airplane.

What about the cost of repetitive inspections and possible repairs and replacements? These cost figures are based on the presumption that no affected Model 8GCBC airplane owner/operator has accomplished the installations or the initial inspection as currently required by AD 98-05-04, and do not account for repetitive inspections. The FAA has no way of determining the number of repetitive inspections each owner/operator of the affected airplanes will incur over the life of his/her airplane.

However, each repetitive inspection will cost substantially less than the initial inspection because the initial cost of the as-needed inspection hole/cover installations will not be repetitive. If installed, as-needed inspection holes/covers allow easy access for the inspection of the wood spars, and the compliance time will enable the owners/operators of the affected airplanes to accomplish the repetitive inspections at regularly scheduled annual inspections.

Regulatory Impact

Does this AD impact various entities? The regulations adopted herein will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

Does this AD involve a significant rule or regulatory action? For the reasons discussed above, I certify that this action (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A copy of the final evaluation prepared for this action is

contained in the Rules Docket. A copy of it may be obtained by contacting the Rules Docket at the location provided under the caption **ADDRESSES**.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. FAA amends § 39.13 by removing Airworthiness Directive (AD) 98-05-04, Amendment 39-10365 (63 FR 10297, March 3, 1998), and by adding a new AD to read as follows:

2000-25-02 American Champion Aircraft Company (ACAC): Amendment 39-12036; Docket No. 98-CE-121-AD; Supersedes AD 98-05-04, Amendment 39-10365.

(a) *What airplanes are affected by this AD?* This AD applies to the following airplane models, all serial numbers, certificated in any category, that are equipped with wood wing spars:

(1) Group 1 airplanes: ACAC Models 7AC, 7ACA, S7AC, 7BCM (L-16A), 7CCM (L-16B), S7CCM, 7DC, S7DC, 7EC, S7EC, 7FC, 7JC, 11AC, S11AC, 11BC, S11BC, 11CC, and S11CC airplanes that have not been modified to incorporate an engine with greater than 90 horsepower.

(2) Group 2 airplanes: ACAC Models 7ECA, 7GC, 7GCA, 7GCAA, 7GCB, 7GCBA, 7GCBC, 7HC, 7KC, 7KCAB, 8GCBC, and 8KCAB airplanes; and any of the airplane models referenced in paragraph (a)(1) of this AD that have been modified to incorporate an engine with greater than 90 horsepower.

(b) *Who must comply with this AD?* Anyone who wishes to operate any of the above airplanes must comply with this AD.

(c) *What problem does this AD address?* The actions specified by this AD are intended to detect and repair or replace damaged wood wing spars. Continued operation with such cracks and damage could progress to an in-flight structural failure of the wing with consequent loss of control of the airplane.

(d) *What actions must be accomplished on all Group 1 airplanes to address this problem?* For any Group 1 airplane as referenced in paragraph (a)(1) of this AD, the following must be accomplished to address the problem:

Action	Compliance time	Procedures
(1) Inspection Requirements: Inspect (detailed visual) the entire length of the front and rear wood wing spars for cracks, compression cracks, longitudinal cracks through the boltholes or nail holes, or loose or missing rib nails. We will refer to these conditions as damage throughout the rest of this section.	Initially inspect at the first annual inspection that occurs 30 calendar days or more after January 19, 2001 (the effective date of this AD), whichever occurs later.	Accomplish in accordance with the instructions in ACAC Service Letter No. 406, Revision A, dated May 6, 1998. This service bulletin specifies as an FAA-approved inspection option using a high-intensity flexible light (e.g., "Bend-A-Light"). A regular flashlight must not be used for this portion of the inspection. Alternative FAA-approved inspection options are listed in this service bulletin.
(2) Additional Inspection Requirements: If, after January 19, 2001 (the effective day of this AD), any airplane is involved in an accident/incident that involves wing damage (e.g., wing surface deformations such as abrasions, gouges, scratches, or dents, etc.), accomplish the inspection required in paragraph (d)(1) of this AD.	Prior to further flight after each accident/incident that involved wing damage.	Accomplish in accordance with the instructions in ACAC Service Letter No. 406, Revision A, dated May 6, 1998. This service bulletin specifies as an FAA-approved inspection option using a high-intensity flexible light (e.g., "Bend-A-Light"). A regular flashlight must not be used for this portion of the inspection. Alternative FAA-approved inspection options are listed in this service bulletin.
(3) Replacement Requirements: If any damage is found during any inspection required by this AD, repair or replace the wood spar.	Prior to further flight after the inspection where the damage is found.	In accordance with Advisory Circular (AC) 43.13-1B, Acceptable Methods, Techniques, and Practices; or other data that is FAA-approved for wing spar repair or replacement.
(4) Reporting Requirements: If any damage is found during any inspection required by this AD, submit a Malfunction or Defect Report (M or D), FAA Form 8010-4, to the FAA.	Within 10 days after the inspection where the damage was found or within 10 days after January 19, 2001 (the effective date of this AD), whichever occurs later.	Mail the information to: FAA, Chicago Aircraft Certification Office (ACO), Attention: Docket No. 98-CE-121-AD, 2300 E. Devon avenue, Des Plaines, Illinois 60018; facsimile: (847) 294-7834. You may also file electronically as discussed in this AD.
(i) Include the airplane model and serial number, the extent of the damage (location and type), and the number of total hours time-in-service (TIS) on the damaged wing.		
(ii) You may submit M or D reports electronically by accessing the FAA AFS-600 web page at http://www.mmac.jccbi.gov/afs/afs600 . Because you will lose access to the report once you electronically submit it, we recommend that you print two copies prior to submitting the report and forward one to the Chicago ACO and keep the other for your records.		
(iii) The Office of Management and Budget (OMB) approved the information collection requirements contained in this regulation under the provisions of the Paperwork Reduction Act of 1980 (14 U.S.C. 3501 <i>et seq.</i>). The OMB assigned this approval Control Number 2120-0056.		

(e) *What actions must be accomplished on all Group 2 airplanes to address this problem?* For any Group 2 airplane as referenced in paragraph (a)(2) of this AD, the following must be accomplished to address the problem:

Action	Compliance time	Procedures
(1) Inspection Requirements: Inspect (detailed visual) the entire length of the front and rear wood wing spars for cracks, compression cracks, longitudinal cracks through the boltholes or nail holes, or loose or missing rib nails. We will refer to these conditions as damage throughout the rest of this section.	Initially inspect at the first annual inspection that occurs 30 calendar days or more after January 19, 2001 (the effective date of this AD) or within the next 13 calendar months after January 19, 2001 (the effective date of this AD), whichever occurs later. Repetitively inspect thereafter at intervals not to exceed 500 hours time-in-service (TIS) or 12 calendar months, whichever occurs first.	Accomplish in accordance with the instructions in American Champion Aircraft Corporation (ACAC) Service Letter No. 406, Revision A, dated May 6, 1998. This service bulletin specifies an FAA-approved inspection option using a high-intensity flexible light (e.g., "Bend-A-Light"). A regular flashlight must not be used for this portion of the inspection. Alternative FAA-approved inspection options are listed in this service bulletin.

Action	Compliance time	Procedures
(2) Additional Inspection Requirements: If, after January 19, 2001 (the effective date of this AD), any airplane is involved in an accident/incident that involves wing damage (e.g., wing surface deformations such as abrasions, gouges, scratches, or dents, etc.), accomplish the inspection required in paragraph (e)(1) of this AD.	Prior to further flight after each accident/incident that involved wing damage.	Accomplish in accordance with the instructions in American Champion Aircraft Corporation (ACAC) Service Letter No. 406, Revision A, dated May 6, 1998. This service bulletin specifies an FAA-approved inspection option using a high-intensity flexible light (e.g., "Bend-A-Light"). A regular flashlight must not be used for this portion of the inspection. Alternative FAA-approved inspection options are listed in this service bulletin.
(3) Replacement Requirements: If any damage is found during any inspection required by this AD, repair or replace the wood spar.	Prior to further flight after the inspection where the damage is found.	In accordance with Advisory Circular (AC) 43.13-1B, Acceptable Methods, Techniques, and Practices; or other data that is FAA-approved for wing spar repair or replacement.
(4) Reporting Requirement: If any damage is found during any inspection required by this AD, submit a Malfunction or Defect Report (M or D), FAA Form 8010-4, to the FAA.	Within 10 days after the inspection where the damage was found or within 10 days after January 19, 2001 (the effective date of this AD), whichever occurs later.	Mail the information to: FAA, Chicago Aircraft Certification Office (ACO), Attention: Docket No. 98-CE-121-AD, 2300 E. Devon Avenue, Des Plaines, Illinois 60018; facsimile: (847) 294-7834. You may also file electronically as discussed in this AD.
(i) Include the airplane model and serial number, the extent of the damage (location and type), and the number of total TIS on the damaged wing.		
(ii) You may submit M or D reports electronically by accessing the FAA AFS-600 web page at http://www.mmac.jccbi.gov/afs/afs600 . Because you will lose access to the report once you electronically submit it, we recommend printing two copies prior to submitting the report and forward one to the Chicago ACO and keep the other for your records.		
(iii) The Office of Management and Budget (OMB) approved the information collection requirements contained in this regulation under the provisions of the Paperwork Reduction Act of 1980 (14 U.S.C. 3501 <i>et seq.</i>). The OMB assigned this approval Control Number 2120-0056.		

(f) *Can I comply with this AD in any other way?*

(1) You may use an alternative method of compliance or adjust the compliance time if:

(i) Your alternative method of compliance provides an equivalent level of safety; and

(ii) The Manager, Chicago Aircraft Certification Office, approves your alternative. Submit your request through an FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager.

(2) ACAC Service Letter 406, Revision A, and ACAC Service Letter 417, Revision C, both dated May 6, 1998, specify additional inspection and installation alternatives over that included in the original issue of these service letters. All inspection and installation alternatives presented in these service letters are acceptable for accomplishing the applicable actions of this AD.

(3) Alternative methods of compliance approved in accordance with AD 98-05-04, which is superseded by this AD, are approved as alternative methods of compliance with this AD.

Note: This AD applies to each airplane identified in paragraph (a) of this AD, regardless of whether it has been modified, altered, or repaired in the area subject to the

requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (f) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if you have not eliminated the unsafe condition, specific actions you propose to address it.

(g) *Where can I get information about any already-approved alternative methods of compliance?* Contact the Chicago Aircraft Certification Office, 2300 E. Devon Avenue, Des Plaines, Illinois 60018; telephone: (817) 294-7697; facsimile: (817) 294-7834.

(h) *What if I need to fly the airplane to another location to comply with this AD?* The FAA can issue a special flight permit under §§ 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate your airplane to a location where you can accomplish the requirements of this AD.

(i) *Are any service bulletins incorporated into this AD by reference?* The inspections required by this AD must be done in accordance with American Champion Aircraft Corporation (ACAC), Service Letter

406, Revision A, dated May 6, 1998. The Director of the Federal Register approved this incorporation by reference under 5 U.S.C. 552(a) and 1 CFR part 51. You can get copies from the American Champion Aircraft Corporation, P.O. Box 37, 32032 Washington Avenue, Highway D, Rochester, Wisconsin 53167; internet address:

"www.amerchampionaircraft.com". You can look at copies at FAA, Central Region, Office of the Regional Counsel, 901 Locust, Room 506, Kansas City, Missouri, or at the Office of the Federal Register, 800 North Capitol Street, NW, suite 700, Washington, DC.

(j) *Are other AD's affected by this action?* This amendment supersedes AD 98-05-04, Amendment 39-10365.

(k) *When does this amendment become effective?* This amendment becomes effective on January 19, 2001.

Issued in Kansas City, Missouri, on December 4, 2000.

Michael Gallagher,
Manager, Small Airplane Directorate, Aircraft Certification Service.

[FR Doc. 00-31450 Filed 12-15-00; 8:45 am]

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