

by the governmental entity representing the state or its political subdivision that the release is conditional and the alien must agree in writing that the following special conditions have been met:

(i) The criminal alien has been informed that any state action to release the alien from incarceration pursuant to section 241(a)(4)(B) of the Act will only suspend, not rescind, the alien's remaining criminal sentence(s) and any related period(s) of incarceration, and that such suspended sentence(s) will be tolled and remain in abeyance to be reinstated should the alien breach any of the express conditions of the executive release order.

(ii) The criminal alien has a final order of removal as required under section 241(a)(4)(B) of the Act. Further, the alien must have admitted and conceded the charges and factual allegations which form the basis of the removal action, and must have waived all rights to appeal any order of removal issued pursuant to authorized procedures. The alien must have waived any right to pursue an appeal of the order of removal, or to seek any relief therefrom, and must further waive any possible challenge to removal under domestic or international law, including but not limited to asylum, withholding of removal, and protection from "refoulement" under the 1951 Convention and the 1967 Protocol Relating to the Status of Refugees or under the Convention Against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment.

(iii) The criminal alien has withdrawn any pending appeal of the underlying criminal conviction and sentence, and waived his or her right to pursue such appeal if the time for filing has not yet expired.

(iv) The criminal alien must cooperate fully with the Service in connection with execution of any final order of removal, particularly with respect to producing travel documents or other evidence of nationality.

(v) The criminal alien must remain outside the United States and agree to refrain from making any attempt to reenter the United States for the period specified by section 212(a)(9)(A)(ii) of the Act (8 U.S.C. 1182(a)(9)(A)(ii)), as amended, in that an alien who has been ordered removed or departed while an order of removal was outstanding is ineligible to seek admission within 10 years of the date of such alien's departure or removal, or within 20 years of such date in the case of a second or subsequent removal, or at any time in the case of an alien convicted of an aggravated felony, unless the Attorney General has expressly consented to such

alien's reentry. Any unlawful return to the United States shall constitute a violation of the alien's conditions of release and shall result in such alien's return to the custody of the state (or political subdivision thereof) for the completion of the alien's sentence and the alien will be subject to Federal prosecution.

(ii) A criminal alien granted early release for removal, who is removed but subsequently illegally returns to the United States may be subject to Federal prosecution. Either party to this agreement shall notify the other of any encounter with such alien. The Attorney General will determine whether the alien should be prosecuted for an unlawful reentry pursuant to section 276 of the Act. After the Attorney General determines whether to prosecute the alien for reentry after removal and any Federal action or period of Federal incarceration has concluded, the state will assume custody of such alien and bear all costs associated with the transportation and escort back to the state or locality. The state (or political subdivision thereof) will hold the alien in state custody to serve the balance of the sentence of imprisonment in an appropriate state facility at state expense.

(12) If, during the period of any remaining sentence, the criminal alien applies to the Attorney General for readmission after removal under this program, and the Service is inclined to grant the request, the Service will notify the state of that request and provide an opportunity for the state to note any objection by the victim or other state authority.

(13) The MOU may be modified in writing at any time by mutual consent of the signatories and/or may be canceled by either party upon 30 days written notice. Pursuant to section 241(a)(4)(D) of the Act, as amended by IIRIRA, no cause or claim may be asserted under section 241 against any official of the United States or of any state to compel the release, removal, or consideration for release or removal of any alien and all MOU's will so state.

Dated: July 2, 1999.

Doris Meissner,

Commissioner, Immigration and Naturalization Service.

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 99-CE-13-AD]

RIN 2120-AA64

Airworthiness Directives; The New Piper Aircraft, Inc. J-2 Series Airplanes That are Equipped With Wing Lift Struts

AGENCY: Federal Aviation Administration, DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This document proposes to adopt a new airworthiness directive (AD) that would apply to certain The New Piper Aircraft, Inc. (Piper) J-2 series airplanes equipped with wing lift struts. The proposed AD would require repetitively inspecting the wing lift struts for dents and corrosion and the wing lift strut forks for cracks; replacing any strut found with corrosion or dents, or forks with cracks; and repetitively replacing the wing lift strut forks. The proposed AD would also require incorporating a "NO STEP" placard on the lift strut. The proposed AD is the result of the Federal Aviation Administration (FAA) inadvertently omitting the J-2 series airplanes from the applicability of AD 99-01-05. The actions specified by the proposed AD are intended to prevent in-flight separation of the wing from the airplane caused by wing lift struts with dents or corrosion or wing lift forks with cracks, which could result in loss of control of the airplane.

DATES: Comments must be received on or before September 8, 1999.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Central Region, Office of the Regional Counsel, Attention: Rules Docket No. 99-CE-13-AD, Room 1558, 601 E. 12th Street, Kansas City, Missouri 64106. Comments may be inspected at this location between 8 a.m. and 4 p.m., Monday through Friday, holidays excepted.

Service information that applies to the proposed AD may be obtained from The New Piper Aircraft, Inc., Customer Services, 2926 Piper Drive, Vero Beach, Florida 32960. Copies of the instructions to the F. Atlee Dodge supplemental type certificate (STC) may be obtained from F. Atlee Dodge, Aircraft Services, Inc., P.O. Box 190409, Anchorage, Alaska 99519-0409. Copies of the instructions to the Jensen Aircraft STC's may be obtained from Jensen

Aircraft, Inc., 9225 County Road 140, Salida, Colorado 81201. This information also may be examined at the Rules Docket at the address above.

FOR FURTHER INFORMATION CONTACT: Mr. William O. Herderich, Aerospace Engineer, FAA, Atlanta Aircraft Certification Office, One Crown Center, 1895 Phoenix Boulevard, suite 450, Atlanta, Georgia 30349; telephone: (770) 703-6084; facsimile: (770) 703-6097.

SUPPLEMENTARY INFORMATION:

Comments Invited

Interested persons are invited to participate in the making of the proposed rule by submitting such written data, views, or arguments as they may desire. Communications should identify the Rules Docket number and be submitted in triplicate to the address specified above. All communications received on or before the closing date for comments, specified above, will be considered before taking action on the proposed rule. The proposals contained in this notice may be changed in light of the comments received.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the proposed rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report that summarizes each FAA-public contact concerned with the substance of this proposal will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this notice must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket No. 99-CE-13-AD." The postcard will be date stamped and returned to the commenter.

Availability of NPRMs

Any person may obtain a copy of this NPRM by submitting a request to the FAA, Central Region, Office of the Regional Counsel, Attention: Rules Docket No. 99-CE-13-AD, Room 1558, 601 E. 12th Street, Kansas City, Missouri 64106.

Discussion

AD 99-01-05, Amendment 39-10972 (63 FR 72132, December 31, 1998), currently requires the following on certain Piper airplanes that are equipped with wing lift struts:

—Repetitively inspecting the wing lift struts for dents and corrosion and the

wing lift strut forks for cracks; replacing any strut found with corrosion or dents, or forks with cracks; and repetitively replacing the wing lift strut forks;

—Incorporating a "NO STEP" placard on the lift strut; and

—Providing the option of installing certain wing lift strut and wing lift strut fork assemblies, as terminating action for repetitive inspection and replacement requirements.

AD 99-01-05 superseded AD 93-10-06, Amendment 39-8586 (58 FR 29965, May 25, 1993). The following describes the differences between AD 93-10-06 and AD 99-01-05:

- AD 99-01-05 clarifies certain requirements of AD 93-10-06;
- The requirement of AD 93-10-06 of repetitively inspecting the lift strut forks on the Piper PA-25 series airplanes was deemed unnecessary by AD 99-01-05;
- AD 99-01-05 incorporates airplane models inadvertently omitted from AD 93-10-06;
- AD 99-01-05 requires fabricating and installing a placard on the lift strut; and
- The J-2 series airplanes were included in the Applicability of AD 93-10-06, but omitted from the Applicability of AD 99-01-05.

The FAA's Determination

After examining the circumstances and reviewing all available information related to the incidents described above, the FAA has determined that:

- The J-2 series airplanes were inadvertently omitted from AD 99-01-05;
- The actions of AD 99-01-05 should apply to the J-2 series airplanes; and
- AD action should be taken to prevent in-flight separation of the wing from the airplane caused by wing lift struts with dents or corrosion or wing lift forks with cracks, which could result in loss of control of the airplane.

Explanation of the Provisions of the Proposed AD

Since an unsafe condition has been identified that is likely to exist or develop in other Piper J-2 series airplanes of the same type design that are equipped with wing lift struts, the FAA is proposing AD action. The proposed AD would require repetitively inspecting the wing lift struts for dents and corrosion and the wing lift strut forks for cracks; replacing any strut found with corrosion or dents, or forks with cracks; and repetitively replacing the wing lift strut forks. The proposed AD would also require installing a

placard on the lift strut, and would provide the option of installing certain wing lift strut and wing lift strut fork assemblies, as terminating action for repetitive inspection and replacement requirements.

Cost Impact

The FAA estimates that 91 airplanes in the U.S. registry would be affected by the proposed AD.

It would take approximately 8 workhours per airplane to accomplish the proposed initial inspection, and the average labor rate is approximately \$60 an hour. Based on these figures, the total cost impact of the proposed initial inspection on U.S. operators is estimated to be \$43,680, or \$480 per airplane. These figures are based only on the cost of the proposed initial inspection and do not take into account the costs of any repetitive inspections. The FAA has no way of determining how many repetitive inspections each owner/operator would incur over the life of the airplane.

It would take approximately 4 workhours per airplane to accomplish the proposed initial wing lift strut fork replacements, and the average labor rate is approximately \$60 an hour. Fork assemblies cost approximately \$110 each and four are required for each airplane. Based on these figures, the total cost impact of the proposed initial wing lift strut fork replacements on U.S. operators is estimated to be \$61,880, or \$680 per airplane.

Airplane operators who do not incorporate the improved design wing lift strut assemblies would have to repetitively replace the wing lift strut forks. The FAA has no way of determining how many airplanes do not have the improved design wing lift strut assemblies installed and would need repetitive strut fork replacements.

Regulatory Impact

The regulations proposed herein would not have substantial direct effects 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, in accordance with Executive Order 12612, it is determined that this proposal would not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

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) if

promulgated, 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 draft regulatory evaluation prepared for this action has been placed 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, Safety.

The Proposed Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration proposes to amend 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. Section 39.13 is amended by adding a new airworthiness directive (AD) to read as follows:

The New Piper Aircraft, Inc.: Docket No. 99-CE-13-AD.

Applicability: J-2 series airplanes, serial numbers 500 through 1975, certificated in any category; that are equipped with wing lift struts.

Note 1: This AD applies to each airplane identified in the preceding applicability provision, 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 the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated in the body of this AD, unless already accomplished.

To prevent in-flight separation of the wing from the airplane caused by wing lift struts with dents or corrosion or wing lift forks with cracks, which could result in loss of control of the airplane, accomplish the following:

Note 2: The paragraph structure of this AD is as follows:

Level 1: (a), (b), (c), etc.

Level 2: (1), (2), (3), etc.

Level 3: (i), (ii), (iii), etc.

Level 4: (A), (B), (C), etc.

Level 2, Level 3, and Level 4 structures are designations of the Level 1 paragraph they immediately follow.

(a) Within 1 calendar month after the effective date of this AD or within 24 calendar months after the last inspection accomplished per AD 93-10-06, whichever occurs later, remove the wing lift struts in accordance with Piper Service Bulletin (SB) No. 528D, and accomplish one of the following (the actions in either paragraph (a)(1), (a)(2), (a)(3), or (a)(4), including subparagraphs, of this AD):

(1) Inspect the wing lift struts for perceptible dents (as defined in the service bulletin referenced below) and corrosion in accordance with the "INSTRUCTIONS" section in Part I of Piper SB No. 528D, dated October 19, 1990.

(i) If no perceptible dents are found in the wing lift strut and no corrosion is externally visible, prior to further flight, apply corrosion inhibitor to each strut in accordance with the SB referenced above. Reinspect the lift struts at intervals not to exceed 24 calendar months.

(ii) If a perceptible dent is found in the wing lift strut or external corrosion is found, prior to further flight, accomplish one of the installations (and subsequent actions presented in each paragraph) specified in paragraphs (a)(3) or (a)(4) of this AD.

(2) Inspect the wing lift struts for corrosion in accordance with the Appendix to this AD. The inspection procedures in this Appendix must be accomplished by a Level 2 inspector certified using the guidelines established by the American Society for Non-destructive Testing, or MIL-STD-410.

(i) If no corrosion is found that is externally visible and all requirements in the Appendix to this AD are met, prior to further flight, apply corrosion inhibitor to each strut in accordance with the SB referenced above. Reinspect the lift struts at intervals not to exceed 24 calendar months.

(ii) If external corrosion is found or if any of the requirements in the Appendix of this AD are not met, prior to further flight, accomplish one of the installations (and subsequent actions presented in each paragraph) specified in paragraphs (a)(3) or (a)(4) of this AD.

(3) Install original equipment manufacturer (OEM) part number wing struts (or FAA-approved equivalent part numbers) that have been inspected in accordance with the specifications presented in either paragraph (a)(1) or (a)(2) of this AD, and are found to be airworthy according to the inspection requirements included in these paragraphs. Thereafter, inspect these wing lift struts at intervals not to exceed 24 calendar months in accordance with the specifications presented in either paragraph (a)(1) or (a)(2) of this AD.

(4) Install new sealed wing lift strut assemblies, part numbers as specified in Piper SB No. 528D (or FAA-approved equivalent part numbers), on each wing as specified in the INSTRUCTIONS section in Part II of the above-referenced SB. These sealed wing lift strut assemblies also include the wing lift strut forks. Installation of these

assemblies constitutes terminating action for the inspection and replacement requirements of both paragraphs (a) and (b) of this AD.

(b) Within the next 100 hours time-in-service (TIS) after the effective date of this AD or within 500 hours TIS after the last inspection, whichever is later, remove the wing lift strut forks and accomplish one of the following (the actions in either paragraph (b)(1), (b)(2) or (b)(3); including subparagraphs, of this AD):

(1) Inspect the wing lift strut forks for cracks using FAA-approved magnetic particle procedures.

(i) If no cracks are found, reinspect at intervals not to exceed 500 hours TIS provided that the replacement requirements of paragraphs (b)(1)(ii)(B) and (b)(1)(ii)(C) of this AD have been met.

(ii) Replace the wing lift strut forks at whichever of the following is applicable:

(A) *If cracks are found on any wing lift strut fork:* Prior to further flight;

(B) *If the airplane is equipped with floats or has been equipped with floats within the last 2,000 hours TIS and no cracks are found during the above inspections:* Upon accumulating 1,000 hours TIS on the wing lift strut forks or within the next 100 hours TIS after the effective date of this AD, whichever occurs later; or

(C) *If the airplane has not been equipped with floats within the last 2,000 hours TIS and no cracks are found during the above inspections:* Upon accumulating 2,000 hours TIS on the wing lift strut forks or within the next 100 hours TIS after the effective date of this AD, whichever occurs later.

(iii) Replacement parts shall be of the same part numbers of the existing part (or FAA-approved equivalent part numbers) and shall be manufactured with rolled threads. Lift strut forks manufactured with machined (cut) threads shall not be utilized.

(iv) The 500-hour TIS interval repetitive inspections are still required when the above replacements are accomplished.

(2) Install new OEM part number wing lift strut forks (or FAA-approved equivalent part numbers). Reinspect and replace these wing lift strut forks at the intervals specified in paragraphs (b)(1)(i), (b)(1)(ii), (b)(1)(iii), and (b)(1)(iv), including all subparagraphs, of this AD.

(3) Install new sealed wing lift strut assemblies, part numbers as specified in Piper SB No. 528D (or FAA-approved equivalent part numbers), on each wing as specified in the INSTRUCTIONS section in Part II of the above-referenced SB.

(i) This installation may have "already been accomplished" through the actions specified in paragraph (a)(4) of this AD.

(ii) No repetitive inspections are required after installing these sealed wing lift strut assemblies.

(c) If holes are drilled in wing lift strut assemblies installed in accordance with (a)(4) or (b)(3) of this AD to attach cuffs, door clips, or other hardware, inspect the wing lift struts at intervals not to exceed 24 calendar months using the procedures specified in paragraphs (a)(1) or (a)(2), including all subparagraphs, of this AD.

(d) Within 1 calendar month after the effective date of this AD and thereafter prior

to further flight after the installation of any lift strut assembly, accomplish one of the following:

(1) Install "NO STEP" decal, Piper part number (P/N) 80944-02, on each wing lift strut approximately 6 inches from the bottom of the struts in a way that the letters can be read when entering and exiting the aircraft; or

(2) Paint the statement "NO STEP" approximately 6 inches from the bottom of the struts in a way that the letters can be read when entering and exiting the aircraft. Use a minimum of 1-inch letters utilizing a color that contrasts with the color of the airplane.

(e) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

(f) An alternative method of compliance or adjustment of the initial and repetitive compliance times that provides an equivalent level of safety may be approved by the Manager, FAA, Atlanta Aircraft Certification Office (ACO), One Crown Center, 1895 Phoenix Boulevard, suite 450, Atlanta, Georgia 30349. The request shall be forwarded through an appropriate FAA Maintenance Inspector, who may add comments and then send it to the Manager, Atlanta ACO.

Note 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Atlanta ACO.

(g) The service bulletins referenced in this AD may be obtained from The New Piper Aircraft, Inc., Customer Services, 2926 Piper Drive, Vero Beach, Florida 32960. Copies of the instructions to the Jensen Aircraft STC's may be obtained from Jensen Aircraft, 9225 County Road 140, Salida, Colorado 81201. Copies of the instructions to the F. Atlee Dodge STC may be obtained from F. Atlee Dodge, Aircraft Services, Inc., P.O. Box 190409, Anchorage, Alaska 99519-0409. These documents may be examined at the FAA, Central Region, Office of the Regional Counsel, Room 1558, 601 E. 12th Street, Kansas City, Missouri.

Appendix to Docket No. 99-CE-13-AD; Procedures and Requirements for Ultrasonic Inspection of Piper Wing Lift Struts

Equipment Requirements

1. A portable ultrasonic thickness gauge or flaw detector with echo-to-echo digital thickness readout capable of reading to 0.001-inch and an A-trace waveform display will be needed to accomplish this inspection.

2. An ultrasonic probe with the following specifications will be needed to accomplish this inspection: 10 MHz (or higher), 0.283-inch (or smaller) diameter dual element or delay line transducer designed for thickness gauging. The transducer and ultrasonic system shall be capable of accurately measuring the thickness of AISI 4340 steel down to 0.020-inch. An accuracy of ± 0.002 -inch throughout a 0.020-inch to 0.050-inch thickness range while calibrating shall be the criteria for acceptance.

3. Either a precision machined step wedge made of 4340 steel (or similar steel with equivalent sound velocity) or at least three shim samples of same material will be needed to accomplish this inspection. One thickness of the step wedge or shim shall be less than or equal to 0.020-inch, one shall be greater than or equal to 0.050-inch, and at least one other step or shim shall be between these two values.

4. Glycerin, light oil, or similar non-water based ultrasonic couplants are recommended in the setup and inspection procedures. Water-based couplants, containing appropriate corrosion inhibitors, may be utilized, provided they are removed from both the reference standards and the test item after the inspection procedure is completed and adequate corrosion prevention steps are then taken to protect these items.

• **Note:** Couplant is defined as "a substance used between the face of the transducer and test surface to improve transmission of ultrasonic energy across the transducer/strut interface."

• **Note:** If surface roughness due to paint loss or corrosion is present, the surface should be sanded or polished smooth before testing to assure a consistent and smooth surface for making contact with the transducer. Care shall be taken to remove a minimal amount of structural material. Paint repairs may be necessary after the inspection to prevent further corrosion damage from occurring. Removal of surface irregularities will enhance the accuracy of the inspection technique.

Instrument Setup

1. Set up the ultrasonic equipment for thickness measurements as specified in the instrument's user's manual. Because of the variety of equipment available to perform ultrasonic thickness measurements, some modification to this general setup procedure may be necessary. However, the tolerance requirement of step 13 and the record keeping requirement of step 14, must be satisfied.

2. If battery power will be employed, check to see that the battery has been properly charged. The testing will take approximately two hours. Screen brightness and contrast should be set to match environmental conditions.

3. Verify that the instrument is set for the type of transducer being used, i.e. single or dual element, and that the frequency setting is compatible with the transducer.

4. If a removable delay line is used, remove it and place a drop of couplant between the transducer face and the delay line to assure good transmission of ultrasonic energy. Reassemble the delay line transducer and continue.

5. Program a velocity of 0.231-inch/microsecond into the ultrasonic unit unless an alternative instrument calibration procedure is used to set the sound velocity.

6. Obtain a step wedge or steel shims per item 3 of the **Equipment Requirements**. Place the probe on the thickest sample using couplant. Rotate the transducer slightly back and forth to "ring" the transducer to the sample. Adjust the delay and range settings to arrive at an A-trace signal display with the

first backwall echo from the steel near the left side of the screen and the second backwall echo near the right of the screen. Note that when a single element transducer is used, the initial pulse and the delay line/steel interface will be off of the screen to the left. Adjust the gain to place the amplitude of the first backwall signal at approximately 80% screen height on the A-trace.

7. "Ring" the transducer on the thinnest step or shim using couplant. Select positive half-wave rectified, negative half-wave rectified, or filtered signal display to obtain the cleanest signal. Adjust the pulse voltage, pulse width, and damping to obtain the best signal resolution. These settings can vary from one transducer to another and are also user dependent.

8. Enable the thickness gate, and adjust the gate so that it starts at the first backwall echo and ends at the second backwall echo. (Measuring between the first and second backwall echoes will produce a measurement of the steel thickness that is not affected by the paint layer on the strut). If instability of the gate trigger occurs, adjust the gain, gate level, and/or damping to stabilize the thickness reading.

9. Check the digital display reading and if it does not agree with the known thickness of the thinnest thickness, follow your instrument's calibration recommendations to produce the correct thickness reading. When a single element transducer is used this will usually involve adjusting the fine delay setting.

10. Place the transducer on the thickest step of shim using couplant. Adjust the thickness gate width so that the gate is triggered by the second backwall reflection of the thick section. If the digital display does not agree with the thickest thickness, follow your instrument's calibration recommendations to produce the correct thickness reading. A slight adjustment in the velocity may be necessary to get both the thinnest and the thickest reading correct. Document the changed velocity value.

11. Place couplant on an area of the lift strut which is thought to be free of corrosion and "ring" the transducer to surface. Minor adjustments to the signal and gate settings may be required to account for coupling improvements resulting from the paint layer. The thickness gate level should be set just high enough so as not to be triggered by irrelevant signal noise. An area on the upper surface of the lift strut above the inspection area would be a good location to complete this step and should produce a thickness reading between 0.034-inch and 0.041-inch.

12. Repeat steps 8, 9, 10, and 11 until both thick and thin shim measurements are within tolerance and the lift strut measurement is reasonable and steady.

13. Verify that the thickness value shown in the digital display is within ± 0.002 -inch of the correct value for each of the three or more steps of the setup wedge or shims. Make no further adjustments to the instrument settings.

14. Record the ultrasonic versus actual thickness of all wedge steps or steel shims available as a record of setup.

Inspection Procedure

1. Clean the lower 18 inches of the wing lift struts using a cleaner that will remove all dirt and grease. Dirt and grease will adversely affect the accuracy of the inspection technique. Light sanding or polishing may also be required to reduce surface roughness as noted in the **Equipment Requirements** section.

2. Using a flexible ruler, draw a 1/4-inch grid on the surface of the first 11 inches from the lower end of the strut as shown in Piper Service Bulletin No. 528D or 910A, as applicable. This can be done using a soft (#2) pencil and should be done on both faces of the strut. As an alternative to drawing a complete grid, make two rows of marks spaced every 1/4-inch across the width of the strut. One row of marks should be about 11 inches from the lower end of the strut, and the second row should be several inches away where the strut starts to narrow. Lay the flexible ruler between respective tick marks of the two rows and use tape or a rubber band to keep the ruler in place. See Figure 1.

3. Apply a generous amount of couplant inside each of the square areas or along the edge of the ruler. Re-application of couplant may be necessary.

4. Place the transducer inside the first square area of the drawn grid or at the first

1/4-inch mark on the ruler and "ring" the transducer to the strut. When using a dual element transducer, be very careful to record the thickness value with the axis of the transducer elements perpendicular to any curvature in the strut. If this is not done, loss of signal or inaccurate readings can result.

5. Take readings inside each square on the grid or at 1/4-inch increments along the ruler and record the results. When taking a thickness reading, rotate the transducer slightly back and forth and experiment with the angle of contact to produce the lowest thickness reading possible. Pay close attention to the A-scan display to assure that the thickness gate is triggering off of maximized backwall echoes.

• **Note:** A reading shall not exceed .041-inch. If a reading exceeds .041-inch, repeat steps 13 and 14 of the **Instrument Setup** section before proceeding further.

6. If the A-trace is unsteady or the thickness reading is clearly wrong, adjust the signal gain and/or gate setting to obtain reasonable and steady readings. If any instrument setting is adjusted, repeat steps 13 and 14 of the **Instrument Setup** section before proceeding further.

7. In areas where obstructions are present, take a data point as close to the correct area as possible.

• **Note:** The strut wall contains a fabrication bead at approximately 40% of the strut chord. The bead may interfere with accurate measurements in that specific location.

8. A measurement of 0.024-inch or less shall require replacement of the strut prior to further flight

9. If at any time during testing an area is encountered where a valid thickness measurement cannot be obtained due to a loss of signal strength or quality, the area shall be considered suspect. These areas may have a remaining wall thickness of less than 0.020-inch, which is below the range of this setup, or they may have small areas of localized corrosion or pitting present. The latter case will result in a reduction in signal strength due to the sound being scattered from the rough surface and may result in a signal that includes echoes from the pits as well as the backwall. The suspect area(s) shall be tested with a Maule "Fabric Tester" as specified in Piper Service Bulletin No. 528D or 910A.

10. Record the lift strut inspection in the aircraft log book.

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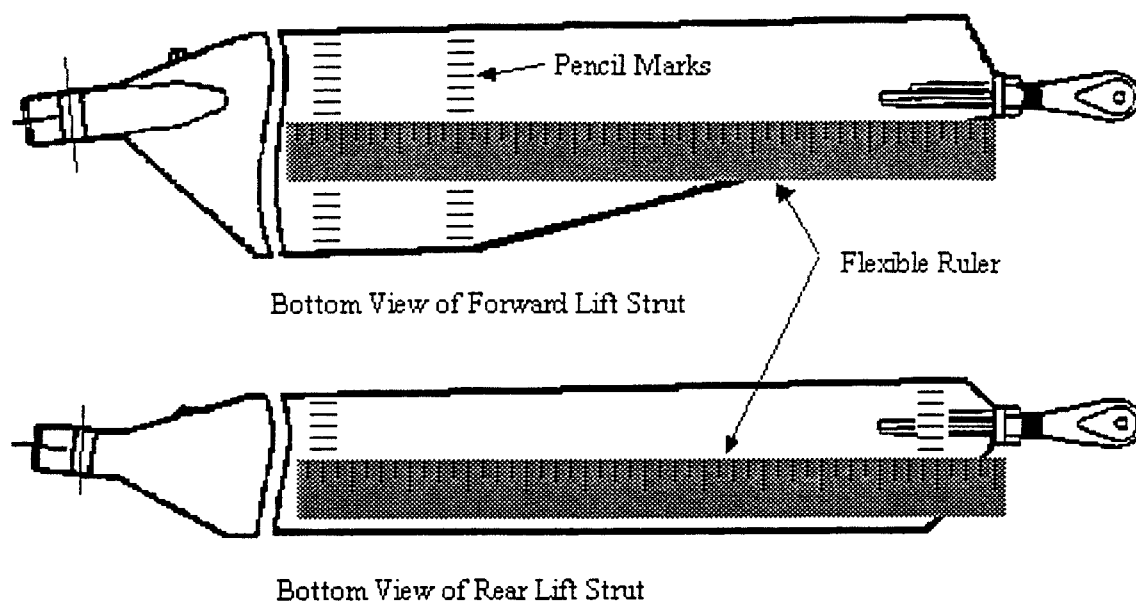


Figure 1

Issued in Kansas City, Missouri, on July 2, 1999.

Marvin R. Nuss,

*Acting Manager, Small Airplane Directorate,
Aircraft Certification Service.*

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