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## PŘÍKAZ K ZACHOVÁNÍ LETOVÉ ZPŮSOBILOSTI

**Číslo: 2006-10-21 Correction**

Datum účinnosti: 22 . června 2006

**Engine Components Incorporated**  
díly pro motory Lycoming řady 360 a 540

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Tento PZZ je vydáván pro výrobek transferovaný pod působnost EASA

Na základě rozhodnutí EASA je následující Příkaz k zachování letové způsobilosti závazný pro všechny výrobky provozované v EU na které se daný PZZ vztahuje.

Provedení PZZ, který se vztahuje podle typu a výrobního čísla na výrobek je pro provozovatele/vlastníka letadla zapsaného do leteckého rejstříku závazné. Neprovedením PZZ ve stanoveném termínu dojde ke ztrátě letové způsobilosti výrobku.

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*Poznámky:*

- Provedení tohoto PZZ musí být zapsáno do provozní dokumentace letadla.
- Případné dotazy týkající se tohoto PZZ adresujte na ÚCL sekce technická.
- Pokud to vyžaduje povaha tohoto PZZ, musí být zpracován do příslušné části dokumentace pro obsluhu, údržbu a opravy letadla.

[Federal Register: June 16, 2006 (Volume 71, Number 116)]  
[Rules and Regulations]  
[Page 34811]  
From the Federal Register Online via GPO Access [wais.access.gpo.gov]  
[DOCID:fr16jn06-9]

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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2005-21331; Directorate Identifier 2005-NE-07-AD; Amendment 39-14604; AD 2006-10-21]**

**RIN 2120-AA64**

### **Airworthiness Directives; Engine Components Incorporated (ECi) Reciprocating Engine Connecting Rods; Correction**

**AGENCY:** Federal Aviation Administration, DOT.

**ACTION:** Final rule; correction.

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**SUMMARY:** This document makes a correction to Airworthiness Directive (AD) 2006-10-21. That AD applies to Engine Components Incorporated (ECi) reciprocating engine connecting rods. We published AD 2006-10-21 in the Federal Register on May 18, 2006, (71 FR 28769). An incorrect amendment number exists under the § 39.13 amended heading. This document corrects the amendment number. In all other respects, the original document remains the same.

**DATES:** Effective Date: Effective June 16, 2006.

**FOR FURTHER INFORMATION CONTACT:** Peter Hakala, Aerospace Engineer, Special Certification Office, FAA, Rotorcraft Directorate, 2601 Meacham Blvd., Fort Worth, TX 76193; telephone (817) 222-5145; fax (817) 222-5785.

**SUPPLEMENTARY INFORMATION:** A final rule AD, FR Doc. 06-4046, that applies to Engine Components Incorporated (ECi) reciprocating engine connecting rods was published in the Federal Register on May 18, 2006, (71 FR 28769). The following correction is needed:

#### **§ 39.13 [Corrected]**

On page 28771, in the third column, under § 39.13 [Amended], in the fifth and sixth lines, "Amendment 39-14605" is corrected to read "Amendment 39-14604".

Issued in Burlington, MA, on June 9, 2006.

Thomas A. Boudreau,

Acting Manager, Engine and Propeller Directorate, Aircraft Certification Service.

[FR Doc. 06-5427 Filed 6-15-06; 8:45 am]

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[Federal Register: May 18, 2006 (Volume 71, Number 96)]  
[Rules and Regulations]  
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## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. FAA-2005-21331; Directorate Identifier 2005-NE-07-AD; Amendment 39-14604; AD 2006-10-21]

RIN 2120-AA64

### Airworthiness Directives; Engine Components Incorporated (ECi) Reciprocating Engine Connecting Rods

**AGENCY:** Federal Aviation Administration (FAA), Department of Transportation (DOT).

**ACTION:** Final rule.

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**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for certain Lycoming Engines (formerly Textron Lycoming) 360 and 540 series reciprocating engines with ECi connecting rods, part number (P/N) AEL11750, installed. The Airmotive Engineering Corp, Division of Engine Components Incorporated (ECi), holds the Parts Manufacturer Approval (PMA) for the affected parts, and markets the parts as ECi parts. This AD requires replacing certain lot and serial numbered connecting rods, P/N AEL11750, having forging part number AEL11488. This AD would also prohibit installing certain ECi connecting rods, P/N AEL11750, into any Lycoming 360 or 540 series reciprocating engines. This AD results from reports of connecting rods with excessive variation in circularity of the journal bores. We are issuing this AD to prevent fatigue failure of the connecting rod and a possible uncommanded shutdown of the engine.

**DATES:** This AD becomes effective June 22, 2006.

**ADDRESSES:** You may examine the AD docket on the Internet at <http://dms.dot.gov> or in Room PL-401 on the plaza level of the Nassif Building, 400 Seventh Street, SW., Washington, DC.

**FOR FURTHER INFORMATION CONTACT:** Peter Hakala, Aerospace Engineer, Special Certification Office, FAA, Rotorcraft Directorate, 2601 Meacham Blvd., Fort Worth, TX 76193; telephone (817) 222-5145; fax (817) 222-5785.

**SUPPLEMENTARY INFORMATION:** The FAA proposed to amend 14 CFR part 39 with a proposed airworthiness directive (AD). The proposed AD applies to Lycoming Engines (formerly Textron Lycoming) 360 and 540 series reciprocating engines with ECi connecting rods, part number (P/N) AEL11750, installed. We published the proposed AD in the Federal Register on October 5,

2005 (70 FR 58103). That action proposed to require replacing certain lot and serial numbered connecting rods, P/N AEL11750, having forging part number AEL11488. That action would also prohibit installing certain ECI connecting rods, P/N AEL11750, into any Lycoming 360 or 540 series reciprocating engines.

### **Examining the AD Docket**

You may examine the docket that contains the AD, any comments received, and any final disposition in person at the Docket Management Facility Docket Offices between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Office (telephone (800) 647-5227) is located on the plaza level of the Department of Transportation Nassif Building at the street address stated in ADDRESSES. Comments will be available in the AD docket shortly after the DMS receives them.

### **Comments**

We provided the public the opportunity to participate in the development of this AD. We have considered the comments received.

### **Date Range for Defective Connecting Rods**

Six commenters request the date range during which the defective ECI connecting rods were manufactured or produced. Knowledge of the manufacturing dates for the defective connecting rods could make them easier to identify. We agree. ECI produced the connecting rods, P/N AEL11750, with lot numbers 1 thru 54, between January 2002 and January 2004. We changed the AD applicability to indicate the dates ECI produced the connecting rods.

### **Labor Time To Replace the Connecting Rods**

Four commenters express concern that the labor time allotted to remove and replace the ECI connecting rods is insufficient. We disagree. The engine labor time estimates come from the Lycoming "Removal and Installation Labor Allowance Guidebook", SSP-875, Revision dated May 2000. The labor allowance indicates that four hours are required to replace each connecting rod. Therefore, a four-cylinder engine with four connecting rods would require 16 workhours to remove and replace the connecting rods. We did not change the AD.

### **Discussion Regarding Failure of the Connecting Rod Insert Bearings**

Two commenters discuss the relationship between the failure of the connecting rod insert bearing and the manufacturing defects in circularity with the ECI connecting rods. We partially agree. The contact signature between the big bore end of the connecting rod and the backs of the insert bearings is critical. Improper machining of the big bore end of the connecting rod can cause irregular support and distress to the insert bearings. A manufacturer of engine insert bearings states that wavy patterns on the connecting rod surface are also indicated by horizontal stripes on the inner surface of the connecting rod bearing. The horizontal stripes or contact signature marks appear after the engine is run from 100 to 200 hours. Less severe contact signature marks on the big bore end of the connecting rod will not propagate a failure, as observed on several Lycoming connecting rods. However, more severe dimensional defects than existed on ECI connecting rods examined by the FAA may cause distress and fatigue failure of the insert bearings. We determined that the fatigue failure of the insert bearing accelerated the fracture of the ECI connecting rod with the resulting engine failure that

prompted this AD. We are not aware of any reports of engine failures caused by Lycoming connecting rods with similar contact signature marks. We did not change the AD.

### **More Frequent Oil and Filter Changes**

Two commenters recommend that the oil and filter be changed every 25 hours and that the oil filters be cut open and inspected for any non-magnetic insert bearing materials. We disagree. Lycoming Engines has issued several mandatory service bulletins for connecting rod insert bearing replacement that also require more frequent oil and filter changes. For example, Lycoming Service Bulletin No. 547 and Service Bulletin No. 561 state: "Until the subject engine has been upgraded with new bearings, Lycoming requires that the oil and filter change interval be reduced to 10 hours and a mandatory filter and suction screen inspection be accomplished at each interval." Lycoming also suggests that more frequent oil changes with examination of the contents of the oil filter can show early signs of connecting rod insert bearing problems. We do not require more frequent oil changes, and we did not change the AD.

### **Society of Automotive Engineers (SAE) Standards for Automobile Engines**

Two commenters ask if the FAA uses SAE standards for engine clearances for water-cooled automobile engines. They also suggest that the FAA is creating new airworthiness standards for air-cooled piston engines. We disagree. We did not use SAE standards for water-cooled automobile engines for the development of the connecting rod AD. We did not change this AD.

### **Extend the NPRM Comment Period**

One commenter requested that we extend the NPRM comment period an additional 90 days. We disagree. Several months have passed since the December 5, 2005 comment deadline without any additional comments. Therefore, we see no reason to extend the comment period. We did not change the AD.

### **Comments That the Proposed AD is Not Necessary**

Several commenters question the need for the connecting rod AD. We disagree. We confirmed that a manufacturing defect existed in the ECi connecting rods. The FAA has determined that this defect was the most probable cause of an engine shutdown and forced landing incident. ECi identified the manufacturing process deficiencies that were responsible for the defective condition and took specific actions to correct these deficiencies. We also determined that the subject ECi connecting rods in service could possess these manufacturing defects and could, therefore, fail during operation. The AD has now been changed to require that the subject connecting rods be removed at 2,000 hours time-in-service (TIS) rather than the 1,500 TIS required in the NPRM. We project that the required replacement time can be extended to 2,000 hours (TIS) while maintaining an acceptable level of safety. With the AD applying to the first 400 production connecting rods, we estimate that only about 100 aircraft engines will be affected. This AD is necessary to insure that these parts are removed from service to prevent this unsafe condition from causing an engine failure and uncommanded shutdown.

### **Discussion of Connecting Rod Service Difficulties**

On October 16, 2003, ECi informed us that a Lycoming Engines O-360-A4M engine experienced an in flight engine failure and uncommanded shutdown. The failure occurred after 50 hours TIS following an engine overhaul. ECi P/N AEL11750 connecting rods were installed in this

engine. The No. 4 connecting rod used in the Lycoming Engines O-360-A4M failed due to destruction of the big bore end bearing and its support. Examination of the No. 1, No. 2, and No. 3 connecting rods indicated an unusual contact signature between the big bore ends and the backs of the respective insert bearings. The signature was essentially the same for each of the three rods and consisted of evenly spaced marks parallel to the big bore end axes. There was also significant damage present on the inner diameter of these three insert bearings. Our metallurgical report also indicated that the big bore end of the connecting rod had been poorly machined. This is consistent with a finding in 2003, that a grinding machine used to produce the parts had introduced irregular shaped holes at the big bore end of the connecting rod due to problems with the bearings, grinding stones and cutting fluid in the grinding machine. Also, FAA approved repair stations reported that the early ECi P/N AEL11750 connecting rods had insufficient clearance for a socket to fit correctly over the connecting rod nut. Dragging of the socket on the side of the connecting rod would result in an incorrect torque value when the connecting rod nut was torqued during engine assembly. ECi changed the design of the connecting rod to provide more socket clearance. An undertorqued rod bolt could loosen during operation.

### **Inspection and Regrinding of the Connecting Rods at Engine Overhaul**

Four commenters recommend that the ECi AEL11750 connecting rods be inspected after removal at engine overhaul and be reground to clean up any defects. We disagree. A Lycoming service bulletin describes the inspection and regrinding of connecting rods at engine overhaul, but the connecting rods in this AD are not made by Lycoming. ECi might be developing a new service bulletin for the identification and inspection of the subject connecting rods. We did not change the AD requirement for the connecting rod removal.

### **Definition of Connecting Rod Accessibility**

Connecting rod accessibility is defined in paragraph (g)(4)(iii) as any maintenance action in which a cylinder assembly is removed for maintenance. These Lycoming engines are normally overhauled at 2,000 hours (TIS), therefore, we estimate that 70% of the subject connecting rods will be replaced at engine overhaul. The subject connecting rods can be replaced when a cylinder assembly is removed for maintenance. If the connecting rods are replaced during cylinder assembly removal, the engine case halves do not have to be separated.

### **Conclusion**

We have carefully reviewed the available data, including the comments received, and determined that air safety and the public interest require adopting the AD as proposed with the changes described previously. We have determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

### **Costs of Compliance**

We estimate that this AD would affect about 100 Lycoming Engines 360 and 540 series reciprocating engines installed on aircraft of U.S. registry. We also estimate that it would take about 4 workhours per connecting rod (a four cylinder engine with four connecting rods would require 16 workhours to remove and replace the connecting rods), and that the average labor rate is \$65 per workhour. Required parts would cost about \$450 per connecting rod. Based on these figures, we estimate the total cost of the AD to U.S. operators to be \$288,000.

## **Authority for This Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in subtitle VII, part A, subpart III, section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

## **Regulatory Findings**

We have determined that this AD will not have federalism implications under Executive Order 13132. This AD 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.

For the reasons discussed above, I certify that this AD:

- (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.

We prepared a summary of the costs to comply with this AD and placed it in the AD Docket. You may get a copy of this summary at the address listed under ADDRESSES.

## **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Safety.

## **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the Federal Aviation Administration amends 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. The FAA amends § 39.13 by adding the following new airworthiness directive:



# AIRWORTHINESS DIRECTIVE

[www.faa.gov/aircraft/safety/alerts/](http://www.faa.gov/aircraft/safety/alerts/)  
[www.gpoaccess.gov/fr/advanced.html](http://www.gpoaccess.gov/fr/advanced.html)

U.S. Department  
of Transportation  
**Federal Aviation  
Administration**



**CORRECTION:** [*Federal Register: June 16, 2006 (Volume 71, Number 116); Page 34811;*  
*www.access.gpo.gov/su\_docs/aces/aces140.html*]

**2006-10-21 Engine Components Incorporated (ECi):** Amendment 39-14604. Docket No. FAA-2005-21331; Directorate Identifier 2005-NE-07-AD.

## Effective Date

(a) This airworthiness directive (AD) becomes effective June 22, 2006.

## Affected ADs

(b) None.

## Applicability

(c) This AD applies to Lycoming Engines (formerly Textron Lycoming) 360 and 540 series reciprocating engines specified in Table 1 of this AD with Engine Components Incorporated (ECi) connecting rods, part number (P/N) AEL11750 installed, limited to Serial Numbers 54/6 and below and produced between January 2002 and January 2004. They are also identified with forging P/N AEL11488 in raised letters on the web of the beam between the big and small ends of the connecting rod.

**TABLE 1.—ENGINE MODELS**

Engine models
O-360-A1A, A1AD, A1C, A1D, A1F, A1F6, A1F6D, A1G, A1G6, A1G6D, A1H, A1H6, A1LD, A1P, A2A, A2D, A2E, A2F, A2G, A2H, A3A, A3AD, A3D, A4A, A4AD, A4D, A4G, A4J, A4K, A4M, A4N, A4P, A5AD, B1A, B1B, B2A, B2B, C1A, C1C, C1E, C1F, C1G, C2A, C2B, C2C, C2D, C2E, C4F, C4P, D1A, D2A, D2B, F1A6, G1A6, J2A;
HO-360-A1A, B1A, B1B, C1A;
IO-360-B1A, B1B, B1C, B1D, B1E, B1F, B1F6, B1G6, B2E, B2F, B2F6, B4A, E1A, F1A, L2A;
LO-360-A1G6D, A1H6;
HIO-360-A1A, A1B, B1A, B1B;
AEIO-360-B1B, B1D, B1F, B1F6, B1G6, B2F, B2F6, B4A, H1A, H1B;
O-540-A1A, A1A5, A1B5, A1C5, A1D, A1D5, A2B, A3D5, A4A5, A4B5, A4C5, A4D5, B1A5, B1B5, B1D5, B2A5, B2B5, B2C5, B4A5, B4B5, D1A5, E4A5, E4B5, E4C5, F1A5, F1B5, G1A5, G2A5, H1A5, H1A5D, H1B5D, H2A5, H2A5D, H2B5D;
AEIO-540-D4A5, D4B5, D4C5, D4D5;
IO-540-A1A5, B1A5, B1B5, B1C5, C1B5, C1C5, C2C, C4B5, C4C5, C4D5, C4D5D, D4A5, D4B5, D4C5, E1A5, E1B5, E1C5, G1A5, G1B5, G1C5, G1D5, G1E5, G1F5, J4A5, N1A5, P1A5, R1A5, T4A5D, T4B5, T4B5D, T4C5D, V4A5, V4A5D;
LTIO-540-K1AD;
TIO-540-C1A, E1A, G1A, H1A, K1AD, AA1AD, AB1AD, AB1BD, AF1A, AF1B, AG1A.

These engines are installed on, but not limited to, the aircraft listed in Table 2 of this AD.

**TABLE 2.—AIRCRAFT MODELS**

<b>Aircraft manufacturer</b>	<b>Aircraft model</b>
Aero Boero	AB-180, AB-260.
Aero Commander	Lark (100), Aero Commander (500, 500-B, 500-E, 500-U).
Aero Engine Service Ltd.	Victa (R-2).
Aerofab Inc.	Renegade 250, Turbo Renegade (270).
Aviamilano	Flamingo (F-250).
Aviat	Husky.
Avions Pierre Robin	(HR100/250).
Beagle	Airedale (A-109), Husky (D5-180 01-U).
Bellanca Aircraft	Scout (8GCBC-CS, 8GCBC FP), Super Decathlon (8KCAB-180), Aries T-250.
Bolkow	207, Klemm (K1-107C).
Britten-Norman	BN-2.
Brooklanda	Scoutmaster.
C.A.A.R.P.	S A.N. (M-23III), C.A.P. (10).
C. Itoh and Co	Fuji FA-200.
Center Est Aeronautique	Regente (DR-253).
Cerva	(CE-43 Guepard).
Cessna Aircraft	Cardinal C-177A and C-177B, Teal III, TSC (1A3), Skyhawk RG, and C-172RG, Cutlass C-172Q.
Christen	Husky (A-1), Christen. Pitts (S-2S), (S-2B).
DeHavilland	Drover (DHA-3MK3), Heron Conversion.
Dinfia	Ranquel (1A-51), Querandi (1A-45).
Dornier	(DO-28, DO-28-B1, DO-8-B1).
Doyn Aircraft	Doyn-Cessna (170B, 172, 172A, 172B).
Doyn Aircraft	Doyn-Beech (Beech 95).
Doyn Aircraft	Doyn-Piper (PA-23 "160", PA-23 "200", PA-24 "250", PA-23 "250").
Earl Horton	Pawnee (Piper PA-25).
Embraer	Corioca (EMB-710), Impanema "AG."
F.F.A	Bravo (200).
Found Bros	(FBA-2C), Centennial (100).
Fuji	(FA-200).
General Aviation	Model 114.
Gippsland	GA-200.
Great Lakes	Trainer.
Grob	G115/Sport-Acro.
H.A.L.	HPT-32.
Hughes Tool Co.	(269A, 269-A-1, YHO-2HU, 300).
Intermountain Mfg Co.	Call Air (A-6, A-9, IAR821, IAR-822, IAR-826, IAR-823).
Kingsford-Smith	Bushmaster (O-6).
Lake Aircraft	Colonial (C-2, LA-4, 4A or 4P), Seawolf.
Malmo	Vipan (MF-10B, MF1-10).
Maule	Star Rocket MX-7-180, MX-7-180A, Star Rocket (MX-7-235), Super Rocket (M-6-235), Super Std. Rocket (M-7-235).
Mid-States Mfg. Co.	Twin Courier (H-500), (U-5).

<b>Aircraft manufacturer</b>	<b>Aircraft model</b>
Mooney Aircraft	Master "21" (M-20D, M-20E), Mark "20B", "20D", (M20B, M20C), Statesman (M-20G), Mark "21" (M-20E), "TLS" M20M.
Moravan	Zlin-50L.
Mundry	CAP-10.
Nash Aircraft Ltd	Petrel.
Neiva	1PD-590V.
Norman Aeroplance Co	NAC-1 Freelance.
Omega Aircraft	BS-12D1.
Partenavia	Oscar (P-66).
Penn Yan	Super Cub Conversion.
Pilatus Britten-Norman	Islander (BN-2A-26), Islander (BN-2A-27, Islander II (BN-2B-26), Islander (BN-2A-21), Trislander (BN-2A-Mark III-2).
Piper Aircraft	Comanche (PA-24), Seminole (PA-44), Cherokee "C" (PA-28 "180"), Cherokee "D" (PA-28 "180"), Archer II (PA-28 "180"), Arrow (PA-28 "180R"), Seminole (PA-44), Comanche (PA-24 "150"), Aztec (PA-23 "250"), Cherokee (PA-24 "250"), Pawnee (PA-24 "235"), Cherokee (PA-28 "235"), Aztec (PA-23 "235"), Cherokee (PA-28 "235"), Comanche (PA-24 "260"), Cherokee Six (PA-32 "260"), Pawnee (PA-25 "260"), Aztec B (PA-23 "250"), Comanche (PA-24 "250"), Aztec C (PA-23 "250"), Aztec F, Comanche (PA-24), Turbo Aztec (PA-23-250).
Pitts	S-1S.
Poeschel	P-300.
Procaer	Picchio (F-15-A).
Rawdon Brow	Radon (T-1).
Raytheon Aircraft Co (Beech)	Travel-Air (95, B-95, B-95A, B-95B), Duchess 76, Sport, Musketeer Custom III, Sundowner 180.
Regente	N-591.
Rhein-Flugzeugbau	RF-V.
Riley Aircraft	Rocket-Cessna (310), Turbo Rocket, Turbo-Aztec.
Robin	Regent (DR400/180), Remorqueur (DR400/180R), R-3170, Aiglon (R-1180T).
Robinson	R-44.
Rockwell	Commander (114, 114B, 114TC).
S.A.A.B.	Safir (91-D).
Schweizer Aircraft Corporation	269A.
S.O.C.A.T.A.	Tobago (TB-10), Rallye Commodore (MS-893), Rallye 180GI, Sportana Sportsman (RS-180), Rallye 235CA, Rallye 235GT, Rallye 235C, TB-20, Trinidad TB-20, Trinidad TC TB-21.
Shrike	(500-S).
Societe Aeronautique Normande. Mousquetaire	D-140, Jodel (D-140C).
Siai-Marchetti	(S-205, SF-260, SF-208).
Silvercraft	
Std. Helicopter	
Sud	Gardan (GY-180).
Tiger Aircraft LLC (American General)	Tiger.

<b>Aircraft manufacturer</b>	<b>Aircraft model</b>
T. R. Smith Aircraft	Aerostar, (600).
United Consultants	See-Bee.
Utva	75.
Valmet	PIK-23.
Varga	Kachina.
Wassmer	Super 4 (WA-50A), Sancy (WA-40), Baladou (WA-40), Pariou (WA-40), (WA-50), Europa WA-52, WA-421, WA4-2V.
Yoeman Aviation	YA-1.

### **Unsafe Condition**

(d) This AD results from reports of connecting rods with excessive variation in circularity of the journal bores. We are issuing this AD to prevent fatigue failure of the connecting rod and possible uncommanded shutdown of the engine.

### **Compliance**

(e) You are responsible for having the actions required by this AD performed within the compliance times specified unless the actions have already been done.

### **Engines Not Repaired or Overhauled Since New**

(f) If your engine has not been overhauled or had any repair since new, no further action is required.

### **Engines Overhauled or Repaired Since New**

(g) If your engine was overhauled or repaired since new, do the following:

(1) Before further flight inspect the maintenance records and engine logbook to determine if the overhaul or repair facility used ECI connecting rods, P/N AEL11750.

(2) If the connecting rods are not ECI, P/N AEL11750, no further action is required.

(3) If the connecting rods are ECI, P/N AEL11750, and if the serial number is 54/7 or higher, no further action is required. (Note: 54 is the lot number and 7 is the serial number of the ECI connecting rod.)

(4) If the connecting rods are ECI, P/N AEL11750, having forging P/N AEL11488 in raised letters on the web of the beam, and if the serial number is 54/6 or lower, do the following:

(i) If the connecting rod has 2,000 or more hours time-in-service (TIS), replace the connecting rod with a connecting rod that has a lot number 55 or higher, or that has a P/N not specified in this AD, within 50 hours TIS after the effective date of this AD.

(ii) If the connecting rod has fewer than 2,000 hours TIS, replace the connecting rod with a connecting rod that has a lot number 55 or higher, or that has a P/N not specified in this AD, at the next engine overhaul, or next accessibility of the connecting rod, but no later than 2,000 hours TIS on the connecting rod.

(iii) For the purpose of this AD, connecting rod accessibility is defined as any maintenance action in which a cylinder assembly is removed for maintenance.

(h) After the effective date of this AD, do not install any ECI connecting rod, P/N AEL11750, that has SN 54/6 or lower into any engine.

### **Alternative Methods of Compliance**

(i) The Manager, Special Certification Office, has the authority to approve alternative methods of compliance for this AD, if requested, using the procedures found in 14 CFR 39.19.

### **Related Information**

(j) None.

### **Material Incorporated by Reference**

(k) None.

Issued in Burlington, Massachusetts, on May 12, 2006.

Thomas A. Boudreau,

Acting Manager, Engine and Propeller Directorate, Aircraft Certification Service.

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