(1) If no corrosion is detected, prior to further flight, apply a protective compound to the areas specified in the service bulletin, in accordance with the service bulletin.

(2) If any corrosion is detected, prior to further flight, repair it in accordance with a method approved by the Manager, International Branch, ANM–116, FAA, Transport Airplane Directorate.

(b) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, International Branch, ANM–116. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, International Branch, ANM–116.

Note 2: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the International Branch, ANM–116.

(c) 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.

(d) The actions shall be done in accordance with Aerospatiale Service Bulletin ATR42–57–0044, dated May 30, 1995; or Aerospatiale Service Bulletin ATR42–57–0044, Revision 1, dated June 28, 1995; which contain the specified effective pages.

Service bulletin referenced and date	Page No.	Revision level shown on page	Date shown on page
ATR42–57–0044, May 30, 1995	1–17	Original	May 30, 1995.
ATR42–57–0044, Revision 1, June 28, 1995	1, 4, 6–8, 15–16	1	June 28, 1995.
	2, 3, 5, 9–14, 17	Original	May 30, 1995.

This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Aerospatiale, 316 Route de Bayonne, 31060 Toulouse, Cedex 03, France. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

Note 3: The subject of this AD is addressed in French airworthiness directive 95–127–063(B), dated August 2, 1995.

(e) This amendment becomes effective on January 23, 1998.

Issued in Renton, Washington, on December 11, 1997.

Gilbert L. Thompson,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 97–32999 Filed 12–18–97; 8:45 am]

BILLING CODE 4910–13–U

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 93–ANE–08; Amendment 39–10260; AD 97–26–17]

RIN 2120–AA64

Airworthiness Directives; Teledyne Continental Motors IO–360, TSIO–360, LTSIO–360, IO–520, LIO–520, TSIO–520, LTSIO–520 Series, and Rolls-Royce plc IO–360 and TSIO–360 Series Reciprocating Engines

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment supersedes an existing airworthiness directive (AD), applicable to certain Teledyne Continental Motors (TCM) IO–520 and TSIO–520 series reciprocating engines, that currently requires ultrasonic inspection for subsurface fatigue cracks in crankshafts installed in TCM IO–520 and TSIO–520 series engines and replacement of the crankshaft if a crack is found. This amendment adds a requirement to remove crankshafts manufactured using the airmelt process and replace them with crankshafts manufactured using the vacuum arc remelt (VAR) process, incorporates new ultrasonic inspection criteria in the AD, adds engine series TCM IO–360, TSIO–360, LTSIO–360, IO–520, LIO–520, TSIO–520, LTSIO–520 and Rolls-Royce, plc IO–360 and TSIO–360 to the applicability, and revises the economic impact analysis. This amendment is prompted by reports of crankshaft failures due to subsurface fatigue cracking on engines that had been inspected in accordance with the current AD. The actions specified by this AD are intended to prevent crankshaft failure and subsequent engine failure.

DATES: Effective January 23, 1998.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of January 23, 1998.

ADDRESSES: The service information referenced in this AD may be obtained from Teledyne Continental Motors, P.O. Box 90, Mobile, AL 36601; telephone (334) 438–3411. This information may be examined at the Federal Aviation Administration (FAA), New England Region, Office of the Assistant Chief Counsel, 12 New England Executive Park, Burlington, MA 01803–5299; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Jerry Robinette, Aerospace Engineer, Atlanta Aircraft Certification Office, FAA, Small Airplane Directorate, Campus Building, 1701 Columbia Ave., Suite 2–160, College Park, GA 30337–2748; telephone (404) 305–7371, fax (404) 305–7348.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to add an airworthiness directive (AD), applicable to certain Teledyne Continental Motors (TCM) IO–360, TSIO–360, LTSIO–360, IO–520 and TSIO–520 series reciprocating engines was published as a supplemental notice of proposed rulemaking (SNPRM) in the **Federal Register** on August 24, 1995 (60 FR 43995). That proposal would have superseded AD 87–23–08, Amendment 39–5735 (52 FR 41937, October 30, 1987), which currently requires ultrasonic inspection of TCM IO–520 and TSIO–520 series engines for sub-surface fatigue cracks in the crankshaft and replacement of the crankshaft, if a crack is found. The proposed AD would have retained the ultrasonic inspection, but would have required the removal of crankshafts manufactured using the airmelt process and required replacement with crankshafts that were manufactured using the vacuum arc remelt (VAR) process. The proposed AD would have also expanded the affected population of engines to add the TCM IO–360, TSIO–360 and LTSIO–360 series engines to the IO–520 and TSIO–520 series engines affected by AD 87–23–08. That proposal was prompted by reports of crankshaft failures due to subsurface fatigue cracking on engines that had been inspected in accordance with AD 87–23–08. That condition, if

not corrected, could result in crankshaft failure and subsequent engine failure.

Since the issuance of that SNPRM, TCM has revised and improved the ultrasonic test procedure and the Federal Aviation Administration (FAA) determined that the proposed AD should reference this new procedure. In addition, the FAA has also determined that TCM LIO–520 and LTSIO–520 and Rolls-Royce, plc IO–360 and TSIO–360 series engines are affected and should be included in this proposal as they are identical in design and manufacturing process. The number of Rolls-Royce, plc engines that were added was small, estimated to be 500 worldwide. The added TCM engines were affected only by the repetitive ultrasonic inspection requirements, as they already have VAR crankshafts.

Since those changes expanded the scope of the originally proposed rule, the FAA determined that it was necessary to reopen the comment period to provide additional opportunity for public comment. On March 12, 1997, the FAA issued a second SNPRM (62 FR 15133, March 31, 1997).

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to all comments received from these three notices: 41 to the original NPRM, 26 to the SNPRM, and 4 to the second SNPRM.

One group of commenters state that the AD should be withdrawn, since the listed price of the replacement part is not believed to be accurate nor will it be available for a sustained period of time. The FAA concurs in part. Since the original issuance of the NPRM, the cost of the exchange crankshaft has increased from $2,222 to $2,599 and the cost analysis has been corrected to reflect this new price. This price assumes the customer exchanges an airmelt crankshaft for a VAR crankshaft. However, some commenters have stated that the price of the crankshaft is $7,000 or higher, but this is based on the outright purchase price without an exchange crankshaft (actual TCM List Outright prices currently range from $7,407 to $8,979). The cost analysis is based on the exchange price because the applicability of this action is limited to registered owners of the specified TCM engine models, and it is assumed these owners have crankshafts installed in their engines.

One group of commenters state that the AD should be withdrawn, since the data used for the NPRM is invalid and the handling of the data is not statistically correct. The FAA does not concur. The data used to justify the AD is valid; as stated previously, it is derived from crankshaft failures where the failure mode was determined by engineering evaluation of numerous failure events, which included reviews of engine operating histories, analytical engine teardowns, and laboratory analyses of the failed crankshafts. The FAA participated in many of these investigative activities.

One commenter (ARSA) presented data from repair stations which they insist is the only valid data. Their data is derived from ultrasonic inspection of airmelt and VAR crankshafts and shows 29 airmelt removals out of 3,821 crankshafts inspected and 3 VAR removals out of 488 crankshafts inspected. They then conclude that statistically there is no difference in the two types of crankshafts. Their statistical comparison of the number they found to the number they inspected is invalid. The comparison must be made to the total population.

A better comparison is to combine their inspection data with the FAA/TCM failure data. This is still not completely accurate but it includes all the data currently available. When this is done, there are 77 airmelt ''events'' out of an initial population of 23,000 and 7 VAR ''events'' out of an initial population of 35,800; this comparison showed an airmelt to VAR ''event'' rate of 17 to 1. An ''event'' is either crankshaft removal per ARSA data or crankshaft failure per FAA/TCM data. When the one set of ARSA data is combined with the latest FAA/TCM data (the latest data includes failures for 1993 through 1996), there are 89 airmelt ''events''. There were no VAR subsurface fatigue failures for 1993 through 1996. The population of the engines has changed since this process was initiated and continues to change, literally each day, which makes failure rate comparisons extremely difficult, if not impossible, to accurately calculate; the airmelt population is now estimated at 10,100. The FAA has determined that the failure rate is high enough to warrant an AD.

One group of commenters state that the AD should be withdrawn, since they operate 10–12 of these engines with no failures to date. The commenters' justification is that in complying with the AD there is no increase in aviation safety but expenses and operating costs will increase. The FAA does not concur. These five comments were all identical but with different signatures. No technical justification was given for not publishing the AD. The FAA is aware of the costs this AD will impose on operators, but has determined that an unsafe condition exists which must be addressed by performing the actions required by this AD. These actions are necessary to return the affected engines to the level of safety established at the time the engine design was type certified by the FAA.

One group of commenters state that the AD should be withdrawn, since unreported propeller strikes have contaminated the data and cannot be eliminated; therefore, the data is invalid. The FAA does not concur. The history of the engines for each data point was evaluated to eliminate any data from propeller strikes and improper operation; however, there is the remote possibility that some of the failures were due to a propeller strike or improper operation. There is no way to be 100% sure that all failures due to propeller strikes and improper operation were eliminated from the data. The data, however, is reliable enough that the FAA feels that the AD is warranted.

One group of commenters state that the AD should be withdrawn, since the FAA did not use the service difficulty reports (SDR) database to validate the findings of the AD; therefore, the data is not valid. The FAA does not concur. As stated in the SNPRM, the SDR database does not identify cracks as being subsurface fatigue cracks or originating from some other source, nor does it easily identify airmelt versus VAR. This information may not have been available at the time the ''M'' or ''D'' report was submitted. The FAA requires the submission of ''M'' or ''D'' reports in certain cases and certainly encourages submittal of all pertinent findings. The SDR database may be used to determine if a particular part/engine is experiencing a problem; however, it may not be possible to determine the exact nature of the problem. Using data sources other than the SDR database does not invalidate the FAA's determination that an AD is warranted.

One commenter states that the AD should be made applicable to engines installed on single-engine aircraft only, since with twin-engine aircraft the second engine is available. The FAA does not concur. Although the second engine is available, the accident/incident data shows that a high percentage of engine out incidents involving twin-engine aircraft result in off airport landings/crashes. For this reason, engines installed on twins should remain in the AD.

One commenter states that TCM should identify VAR crankshafts on the propeller flange instead of on the cheek, as this would allow the identification of VAR crankshafts without separating the case halves. The FAA does not concur.

If the crankshaft has had an ultrasonic inspection in accordance with TCM Service Bulletin M87–5, Revision 1, or AD 87–23–08, the heat code, the letter ''V'' (only if it is a VAR crankshaft) and the letter ''U'' will be vibroetched on the propeller flange. If the ''V'' is missing then it is an airmelt crankshaft. In addition, this AD requires compliance at overhaul or whenever the crankshaft is removed from the engine so that the internal marking will be visible. Of course, any new crankshaft purchased from TCM will be VAR, and even if TCM started to mark them now there is still over a decade of production which have no marking on the exterior.

One commenter states that the IO–360 series engines should be removed from the AD's applicability, as verbal contact with their members (800 total, 225 using the IO–360 engine) indicate no problems. The commenter believes that the failures are associated with ground strikes and improper operation of engines with under 1,200 hours total time. The FAA does not concur. The issue of propeller strikes and improper operation has been previously addressed. The FAA data shows that 5 of the 8 IO/TSIO–360 airmelt crankshaft failures occurred on IO–360 engines (the data from ARSA does not differentiate between 360 and 520 series engines). Of the five IO–360 failures, two had more than 1,200 hours total time.

One group of commenters state that the AD should be withdrawn, since the time in service of the engines are not accurately represented in FAA data because TCM rebuilt engines are included in data. Engines with serial numbers (S/Ns) lower than 300000 are reserved by TCM for rebuilt engines. The FAA does not concur. The FAA agrees that many of the engines listed are rebuilt by TCM, where the time in service of the crankshaft cannot be accurately determined, but the crankshaft would be considered high time. However, there are other engines listed which are ''first run'' with low time in service failures. The data supports the FAA's position that the failures are random and time in service is not the determining factor.

One group of commenters state that the AD should be withdrawn, since there will be a loss of revenue to the repair stations, overhaulers, etc. Some commenters state that TCM is replacing the crankshafts in rebuilt engines at no charge to the customer, thereby reducing the potential for overhauls. The commenters state that they have lost numerous overhauls because their customers have elected to buy a TCM rebuilt engine instead of paying for an overhaul. The commenters consider this an unfair business practice and feel that the FAA is furthering this scheme by issuing an AD.

The FAA disagrees. The commenters ignore the FAA's determination that an unsafe condition is likely to exist or develop on engines of this type design. The FAA recognizes that competition affects the profitability of entities engaged in the aviation industry, but denies any scheme to aid one competitor over another. That the original manufacturer of these engines has elected to compete in the overhaul market does not affect the FAA's determination that an unsafe condition exists or the need for this AD to address that safety issue.

One commenter states that the cost is shown as an annual amount but should have been shown as a total amount. The commenter believes this economic analysis is unprecedented and irregular and undermines the confidence of the aviation general public in the rulemaking process. The FAA does not concur. The FAA normally shows costs on an annual basis when compliance with an AD will be extended over a long time frame. The total costs are generally shown, but in this case, as stated in the SNPRM, ''The FAA estimates that approximately 10% of the affected engines will be overhauled each year''; thus it should be clear that it will take approximately 10 years before all the affected engines are in compliance. The total cost is easily derived by multiplying the annual cost estimate by 10. This issue was avoided in the second SNPRM by showing both annual and total costs.

Two commenters state that the cost estimate is too low, as a big cost in procuring a new crankshaft is not stated; i.e., the shipping/freight cost, which should be included in the cost estimate for this AD. The FAA concurs. Since the FAA's cost estimate of a replacement crankshaft is based on an ''exchange'' part, the FAA concurs that the costs of shipping are appropriately included as direct cost of the replacement part. Shipping costs will vary widely however, and the FAA has no reasonable means to estimate those costs. Therefore, the FAA will use the commenters' estimate of $100 for shipping costs and adjust the cost analysis accordingly.

One commenter states that the AD should be withdrawn, since the economic impact does not include the cost to remove the engine and propeller from the airplane and to reinstall them. The FAA does not concur. The AD is to be accomplished at overhaul or whenever the crankcase is separated. Since the engine and propeller, in either case, must be removed anyway, there will be no additional expense to remove/reinstall the engine and propeller in order to comply with the AD.

One commenter states that the FAA should acquire more data about the currently required ultrasonic inspection before issuing the AD. The commenter questions whether any of the engines that failed that were listed in the TCM data had undergone the required ultrasonic inspection. The FAA does not concur. Of the failures listed in the FAA/TCM data, 22 airmelt and 1 VAR had been inspected one or more times in accordance with AD 87–23–08 and/or TCM SB M87–5, or M87–5, Revision 1. All of the crankshafts in the data provided by ARSA (29 airmelt and 3 VAR) were removed from service because they failed the ultrasonic inspection.

One group of commenters state that the AD should be withdrawn, since the data on which the FAA's determination that an unsafe condition exists was not available to the commenter for review. The FAA does not concur. The commenters have filed a number of comments with the AD docket file that indicate a careful review of available data from a number of sources, including the docket file. The FAA denies that the information available in the docket file is inadequate to warrant AD action. While some information cannot be included in the public docket file due to the proprietary nature of the information, the FAA has placed in the docket a summary of the data on which it bases its determination that an unsafe condition exists, that the unsafe condition is likely to exist or develop on other products of the same type design, and that this AD is necessary to address this safety concern.

One commenter states that in Note 2 of the proposed AD, reference was made to the term magnaflux; the commenter correctly points out that magnaflux is a registered trademark and should not be used in this context. The generic terminology magnetic particle inspection should be used instead. The FAA concurs and has revised this final rule accordingly.

Two commenters state that the AD should be withdrawn, since the FAA has failed to address comments made to the previous NPRM and SNPRM. The FAA does not concur. The purpose of the SNPRM is to continue the fact gathering process. For clarity, certain comments were partially addressed in the SNPRMs; however, all comments have been addressed in the processing of this final rule.

One commenter states that the AD should be withdrawn, since the FAA has not substantiated the inclusion of the Rolls-Royce, plc engines which are not US type certificated. The FAA does not concur. The FAA stated in the second SNPRM that the Rolls-Royce, plc engines are identical in design and manufacturing process, which substantiates their inclusion. It is true that there is no US type certificate for these engines; however, these engines are accepted for use on US type certificated airplanes, and several are installed on US registered aircraft. Therefore, TCM service information and FAA ADs apply to these engines.

One commenter states that the AD should be withdrawn, since a number of alternatives to AD action already exist and they have been shown to be as effective as an AD. The alternatives include the current TCM service information, special TCM pricing, strong sales of TCM rebuilt engines and attrition of older airmelt crankshafts. The FAA does not concur. There was TCM service information prior to the initial issuance of the original NPRM and that did not affect the failure rate. The special TCM pricing has helped but is not enough to warrant no AD action. Strong sales of TCM rebuilt engines and attrition of older crankshafts certainly help the situation, but, again, are not sufficient to warrant no AD action. The data reflects the need for the AD and does not show that the alternatives presented are as effective as an AD.

One commenter states that the AD should be withdrawn since the SNPRM mandates a standard maintenance practice which is in conflict with FAA internal guidance on the issuance of ADs. The FAA does not concur. The problem here is not a maintenance procedure, but a manufacturing process, and it affects all the affected engines regardless of who is performing the maintenance, or the quality of maintenance. The FAA has determined that an unsafe condition exists or can develop on these crankshafts. It is therefore incumbent on the FAA to issue an AD.

After careful review of the available data, including the comments noted above, the FAA has determined that air safety and the public interest require the adoption of the rule with the changes described previously. The FAA has determined that these changes will not increase the scope of the AD.

The FAA estimates that 10,100 engines are installed on aircraft of U. S. registry and will need to have the crankshaft replaced, that it will take approximately 1 work hour per engine to determine the type of crankshaft installed and that the average labor rate is $60 per work hour. Required parts will cost approximately $2,599 and shipping will cost approximately $100. Based on these figures, the cost impact of replacing crankshafts on U. S. operators is estimated to be $27,865,900 over a 10-year period or $2,786,590 annually.

The FAA further estimates that 59,300 engines with VAR crankshafts installed would require ultrasonic inspections and the estimated cost of performing an ultrasonic inspection is $200. The FAA estimates that approximately 10%, or 5,930 engines, would need to be overhauled annually, so the estimated total cost impact for ultrasonic inspections is $1,186,000 annually.

Therefore, the FAA estimates the total cost impact of the AD to be $27,865,900 over a 10-year period, plus an additional $1,186,000 annually for the repetitive ultrasonic inspections.

The regulations adopted herein will 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 final rule does 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) 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 final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from 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, pursuant to 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. Section 39.13 is amended by removing Amendment 39–5735 (52 FR 41937, October 30, 1987) and by adding a new airworthiness directive, Amendment 39–10260, to read as follows:

97–26–17 **Teledyne Continental Motors and Rolls-Royce, plc:** Amendment 39–10260. Docket 93–ANE–08. Supersedes AD 87–23–08, Amendment 39–5735.

Applicability: Teledyne Continental Motors (TCM) IO–360, LTSIO–360, TSIO–360, IO–520, LIO–520, LTSIO–520 and TSIO–520 series reciprocating engines built on or prior to December 31, 1980; rebuilt TCM IO–360, LTSIO–360, TSIO–360, IO–520, LIO–520, LTSIO–520 and TSIO–520 series reciprocating engines with serial numbers lower than those listed in TCM Critical Service Bulletin (SB) No. CSB96–8, dated June 25, 1996; TCM factory overhauled IO–360, LTSIO–360, TSIO–360, IO–520, LIO–520, LTSIO–520 and TSIO–520 series reciprocating engines with serial number of 901203H and lower; and Rolls-Royce, plc IO–360 and TSIO–360 series reciprocating engines with any serial number. These engines are installed on but not limited to the following aircraft: Raytheon (formerly Beech) models 95–C55, 95–C55A, D55, D55A, E55, E55A, 58, 58A, 58P, 58PA, 58TC, 58TCA, S35, V35, V35A, V35B, E33A, E33C, 35–C33A, 36, A36, F33A, F33C and A36TC; Bellanca model 17–30A; Cessna models 172XP, A185, A188, T188C, 206, T206, 207, T207, 210, T210, P210, 310R, T310P, T310Q, T310R, 320D, 320E, 320F, 336, 337, T337, P337, 340, 401, 402, 414 and T41B/C; Colemill conversion of Commander 500A; Goodyear Airship Blimp 22; Maule Model M–4–210, M–4–210C, M–4–210S, M–4–210T, and M–5–210C; Mooney model M20–K; Navion model H; Pierre Robin HR 100; The New Piper Aircraft, Inc. (formerly Piper Aircraft Company) models PA28–201T, PA28R–201T, PA28RT–201T, PA34–200T and PA34–220T; Prinair Dehavilland Heron; Reims models FR172, F337 and FT337; and Swift Museum Foundation, Inc. models GC–1A and GC–1B equipped with the IO–360 engine.

Note 1: This airworthiness directive (AD) applies to each engine 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 engines 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 (d) 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, unless accomplished previously.

To prevent crankshaft failure and subsequent engine failure, accomplish the following:

(a) At the next engine overhaul, or whenever the crankshaft is next removed from the engine, after the effective date of this AD, whichever occurs first, determine if the crankshaft was manufactured using the airmelt or vacuum arc remelt (VAR) process in accordance with the identification procedure described in TCM Critical SB No. CSB96–8, dated June 25, 1996. If the crankshaft was manufactured using the airmelt process or if the manufacturing process is unknown, remove the crankshaft from service and replace with a serviceable crankshaft manufactured using the VAR process.

(b) For all TCM IO–360, LTSIO–360, TSIO–360, IO–520, IO–520, LTSIO–520 and TSIO–520 and Rolls-Royce, plc IO–360 and TSIO–360 engine models that have VAR crankshafts installed, regardless of serial number; at the next and every subsequent crankshaft removal from the engine case or installation of a replacement crankshaft, prior to crankshaft installation in the engine, conduct an ultrasonic inspection of the crankshaft in accordance with the procedures specified in TCM Mandatory SB No. MSB96–10, dated August 15, 1996, and, if necessary, replace with a serviceable part.

Note 2: Accomplishment of the ultrasonic inspection required by this AD does not fulfill any requirements for magnetic particle inspection or any other inspections specified in TCM or Rolls-Royce, plc overhaul manuals.

(c) The ultrasonic inspection of the crankshaft must be performed by a non-destructive test (NDT) ultrasonic (UT) Level II inspector who is qualified under the guidelines established by the American Society of Nondestructive Testing or MIL–STD–410 or FAA-approved equivalent, or must be trained by TCM personnel or their designated representative on how to accomplish and conduct this inspection procedure. The person approving the engine for return to service is required to verify that the UT inspection was accomplished in accordance with the requirements of this paragraph.

(d) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Atlanta Aircraft Certification Office. Operators shall submit their requests through an appropriate FAA Maintenance Inspector, who may add comments and then send it to the Manager, Atlanta Aircraft Certification Office.

Note 3: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the Atlanta Aircraft Certification Office.

(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 aircraft to a location where the requirements of this AD can be accomplished.

(f) The actions required by this AD shall be done in accordance with the following TCM service documents:

Document No.	Pages	Date
CSB96–8 ..... Total pages: 6.	1–6	June 25, 1996.
MSB96–10 ..... Total pages: 3.	1–3	August 15, 1996.

This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Teledyne Continental Motors, P.O. Box 90, Mobile, AL 36601; telephone (334) 438–3411. Copies may be inspected at the FAA, New England Region, Office of the Assistant Chief Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(g) This amendment becomes effective on January 23, 1998.

Issued in Burlington, Massachusetts, on December 12, 1997.

Jay J. Pardee,

Manager, Engine and Propeller Directorate, Aircraft Certification Service.

[FR Doc. 97–33142 Filed 12–18–97; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 97–SW–50–AD; Amendment 39–10261; AD 97–26–18]

RIN 2120–AA64

Airworthiness Directives; Eurocopter France Model SA–360C Helicopters

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule; request for comments.

SUMMARY: This amendment adopts a new airworthiness directive (AD) that is applicable to Eurocopter France Model SA–360C helicopters. This action requires replacement of the main gear box (MGB) input bevel pinion (bevel pinion). This amendment is prompted by service reports of bevel pinion fatigue cracking. This condition, if not corrected, could result in failure of the MGB and a subsequent forced landing.

DATES: Effective January 5, 1998.

Comments for inclusion in the Rules Docket must be received on or before January 20, 1998.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Office of Regional Counsel, Southwest Region, Attention: Rules Docket No. 97-SW–50-AD, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137.

FOR FURTHER INFORMATION CONTACT: Mr. Shep Blackman, Aerospace Engineer, FAA, Rotorcraft Directorate, Rotorcraft Standards Staff, 2601 Meacham Blvd., Fort Worth, Texas 76137, telephone (817) 222–5296, (817) 222–5961.

SUPPLEMENTARY INFORMATION: The Direction Generale De L'Aviation (DGAC), which is the airworthiness authority for France, recently notified the FAA that an unsafe condition may exist on Eurocopter France Model SA–360C helicopters with MGB, part number (P/N) 360A32–2000—all dash numbers, installed. The DGAC advises that replacement of the MGB bevel pinion, P/N 360A32–1021–20, is necessary at 1,000 hours time-in-service (TIS) intervals to prevent fatigue cracking of the bevel pinion, failure of the MGB, and a subsequent forced landing.

Eurocopter France has issued Service Bulletin No. 01.35, dated January 14, 1997, which specifies replacement of the MGB bevel pinion at 1,000 hour TIS intervals. The DGAC classified this service bulletin as mandatory and issued DGAC AD 97–027–041(B), dated February 12, 1997, in order to assure the continued airworthiness of these helicopters in France.

This helicopter model is manufactured in France and is type certificated for operation in the United States under the provisions of section 21.29 of the Federal Aviation Regulations (14 CFR 21.29) and the applicable bilateral airworthiness agreement. Pursuant to this bilateral airworthiness agreement, the DGAC has kept the FAA informed of the situation described above. The FAA has examined the findings of the DGAC, reviewed all available information, and determined that AD action is necessary for products of this type design that are certificated for operation in the United States.

Since an unsafe condition has been identified that is likely to exist or develop on other Eurocopter France Model SA–360C helicopters of the same type design registered in the United States, this AD is being issued to prevent bevel pinion fatigue cracking, failure of the MGB, and a subsequent forced landing. This AD requires replacement of the bevel pinion at specified TIS intervals.

None of the Eurocopter France Model SA–360C helicopters affected by this AD action are on the U.S. Register. All