

performed by Fliteline, this action requires verification of all life limited components, inspection of affected components, and verification of compliance with all applicable AD's. This amendment is prompted by the results of a Federal Aviation Administration (FAA) investigation involving engines repaired, assembled, modified, or installed by Fliteline. The actions specified by this AD are intended to prevent uncontained failure of turbine rotors, fire, or loss of aircraft control.

**EFFECTIVE DATE:** September 5, 1995.

**FOR FURTHER INFORMATION CONTACT:**

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**SUPPLEMENTARY INFORMATION:**

A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an airworthiness directive (AD) that is applicable to AlliedSignal, Inc. (formerly Allied-Signal, Inc., Garrett Engine Division, Garrett Turbine Engine Company, and AiResearch Manufacturing Co. of Arizona) TPE331 series turboprop and TSE331 series turboshaft engines was published in the **Federal Register** on August 5, 1994 (59 FR 39983). That action proposed to require a record check of engine records to determine if any repair, assembly, modification, or installation work was performed by Fliteline Maintenance, formerly located in Wharton, Texas, or Mr. Eugene E. Shanks, or Mr. Carl Ramirez (collectively referred to as "Fliteline"). In addition, for engines determined to have repair, assembly, modification, or installation work performed by Fliteline, this action requires verification of all life limited components, inspection of affected components, and verification of compliance with all applicable AD's.

The Federal Aviation Administration (FAA) received a report of an aircraft accident involving an Ayres S2R-600 aircraft, with a modified AlliedSignal, Inc. (formerly Allied-Signal, Inc., Garrett Engine Division, Garrett Turbine Engine Company, and AiResearch Manufacturing Co. of Arizona) Model TPE331-1-151A turboprop engine installed. The FAA has determined that the engine installed on the accident aircraft was a configuration not approved for that aircraft and was improperly modified. The unapproved configuration and improper modification on that engine were performed by Mr. Eugene E. Shanks, the owner of Fliteline Maintenance, a

domestic repair station, formerly located in Wharton, Texas. Since this accident, the FAA conducted further investigation of other AlliedSignal, Inc. TPE331 series engines repaired or maintained by Mr. Eugene E. Shanks under the name of Fliteline Maintenance. On these engines, the FAA found that the requirements of some applicable AD's had not been performed when the engine records indicated that the work had been performed, the records for life limited turbine components indicated more useful life than the components actually had remaining, parts were installed that are not approved for aircraft use, and modifications that had been performed without approved data. In addition, the FAA has determined that the records maintained by Fliteline Maintenance on the engines it repaired, assembled, or modified do not identify all of the suspect engine models and serial numbers. These conditions, if not corrected, could result in uncontained failure of turbine rotors, fire, or loss of aircraft control.

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the comments received.

One commenter concurs with the rule as proposed.

Two commenters describe their service history of safe operation with aircraft and engines maintained by Fliteline. Therefore the commenters conclude that no AD is necessary. The FAA does not concur. The FAA's investigation has revealed a substantial number of component and AD discrepancies on many engines maintained by Fliteline. These discrepancies constitute an unsafe condition that exists or is likely to develop on engines of the same type design. This AD corrects that unsafe condition.

One commenter states that an AD is not necessary because every operator that has maintenance performed by Fliteline should know exactly the configuration and condition of their engine because that operator pays the bills. The commenter believes that an Advisory Circular (AC) might be in order, not an AD. The FAA does not concur. An AC provides guidance and information for complying with a related Federal Aviation Regulation(s). This AD identifies those products in which the FAA has found an unsafe condition and prescribes the actions each operator must take to correct that unsafe condition.

Three commenters state that the FAA should attempt to identify the engines and life limited components by engine

serial number rather than including every TPE331 engine in the applicability. The commenters state that AD applicability is too broad and unnecessary. The FAA does not concur. The FAA has determined that Fliteline performed maintenance on a wide range of engine models and life limited turbine components. In addition, Fliteline did not produce a reliable and comprehensive list of suspect engines and models. Therefore, the applicability of the AD encompasses a number of engine models and requires a records search to determine which life limited components are affected by the AD.

One commenter states that Mr. Ramirez's name should be removed from the AD because he identified a list of TPE331 series engine on which he performed maintenance, including serial numbers: P-06045, P-06460C, P-20050, P-20288, P-20411, P-34004, P-34010, P-34013, P-34015, P-40222, P-40227, P-61041, P-90252C, P-91094C, P-92129, P-92159, and P-92190. The FAA does not concur. The FAA was unable to verify that the list provided by Mr. Ramirez represented a complete list of all the engines maintained by him. Therefore the FAA could not justify removing his name from the AD.

One commenter states that 50% of the engines maintained by Fliteline were single engine restricted category aircraft that were certified under the predecessors to the Federal Aviation Regulations and implied that these engines should not be affected by the AD. The FAA does not concur. Airworthiness Directives issued under part 39 of the Federal Aviation Regulations apply to all identified products when an unsafe condition exists and when that condition is likely to exist and develop in other products of the same type design, regardless of the certification basis.

Two commenters state that the compliance time in paragraph (a) in the NPRM is unreasonably short for airlines with many suspect engines or with high utilization. The FAA concurs in part. The FAA's investigation has shown that it is very unlikely that a single owner would operate a fleet of engines maintained by Fliteline. However, the overall scope of the records review has increased. The records review now encompasses aircraft maintenance records and purchase receipts along with engine maintenance records. In addition, the FAA has determined that the 20 hour compliance time to complete paragraph (a) is not essential to maintain safety and therefore is not necessary. The AD has, therefore, been changed to require accomplishing paragraphs (a) and (b) within 400 cycles