

Proposed Rules

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This section of the FEDERAL REGISTER contains notices to the public of the proposed issuance of rules and regulations. The purpose of these notices is to give interested persons an opportunity to participate in the rule making prior to the adoption of the final rules.

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2006-23706; Directorate Identifier 2006-NE-03-AD]

RIN 2120-AA64

Airworthiness Directives; Honeywell International Inc. TPE331 Series Turboprop Engines

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

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to adopt a new airworthiness directive (AD) for Honeywell International Inc. TPE331 series turboprop engines with certain part numbers of Woodward fuel control assemblies installed. This proposed AD would require initial and repetitive dimensional inspections of the splines between the fuel pump and fuel control, for wear or damage. This proposed AD would also require replacing those fuel control assemblies with serviceable modified fuel control assemblies with improved overspeed protection. This proposed AD results from reports of loss of the drive between the fuel pump and fuel control, leading to engine overspeed, overtorque, overtemperature, uncontained rotor failure, and asymmetric thrust in multi-engine airplanes. We are proposing this AD to prevent rapid, uncommanded, uncontrolled increase in fuel flow to the engine, asymmetric thrust, uncontained rotor failure, and damage to the airplane.

DATES: We must receive any comments on this proposed AD by May 8, 2006.

ADDRESSES: Use one of the following addresses to comment on this proposed AD.

- DOT Docket Web site: Go to <http://dms.dot.gov> and follow the instructions for sending your comments electronically.

- Government-wide rulemaking Web site: Go to <http://www.regulations.gov> and follow the instructions for sending your comments electronically.

- Mail: Docket Management Facility; U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, Room PL-401, Washington, DC 20590-0001.

- Fax: (202) 493-2251.

- Hand Delivery: Room PL-401 on the plaza level of the Nassif Building, 400 Seventh Street, SW., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

You can get the service information identified in this proposed AD from Honeywell Engines, Systems & Services, Technical Data Distribution, M/S 2101-201, P.O. Box 52170, Phoenix, AZ 85072-2170; telephone: (602) 365-2493 (General Aviation); (602) 365-5535 (Commercial); fax: (602) 365-5577 (General Aviation and Commercial).

You may examine the comments on this proposed AD in the AD docket on the Internet at <http://dms.dot.gov>.

FOR FURTHER INFORMATION CONTACT: Joseph Costa, Aerospace Engineer, Los Angeles Aircraft Certification Office, FAA, Transport Airplane Directorate, 3960 Paramount Blvd., Lakewood, CA 90712-4137; telephone (562) 627-5246; fax (562) 627-5210.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send us any written relevant data, views, or arguments regarding this proposal. Send your comments to an address listed under **ADDRESSES**. Include "Docket No. FAA-2006-23706; Directorate Identifier 2006-NE-03-AD" in the subject line of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of the proposed AD. We will consider all comments received by the closing date and may amend the proposed AD in light of those comments.

We will post all comments we receive, without change, to <http://dms.dot.gov> including any personal information you provide. We will also post a report summarizing each substantive verbal contact with FAA personnel concerning this proposed AD. Using the search function of the DOT Web site, anyone can find and read the comments in any of our dockets,

including the name of the individual who sent the comment (or signed the comment on behalf of an association, business, labor union, etc.). You may review the DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (65 FR 19477-78) or you may visit <http://dms.dot.gov>.

Examining the AD Docket

You may examine the docket that contains the proposal, any comments received and, any final disposition in person at the DOT Docket Office 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 Docket Management Facility receives them.

Discussion

Within the past 30 years, we have received reports of 51 broken, sheared, or excessively worn fuel pump/fuel control drive splines on TPE331 series engines, which have resulted in operational anomalies such as uncontrollable fuel flow, overtorques, or overspeeds. In 11 of these reports, failed fuel pump drive shafts led to engine overspeed. Five of those overspeed events caused a turbine wheel to separate.

While investigating the noted service events, we determined that the loss of drive between the engine-driven fuel pump and the fuel control governor system, results in a rapid, uncommanded, and uncontrolled increase in engine fuel flow. The effects of fuel flow increase could include overspeed, overtorque, overtemperature of the engine, significant asymmetric thrust, inability to produce reverse thrust, and uncontained separation of high speed rotating components. This condition, if not corrected, could result in rapid, uncommanded, uncontrolled increase in fuel flow to the engine, uncontained failure, and damage to the aircraft.

This proposed AD would require initial and repetitive dimensional inspections of the splines between the fuel pump and fuel control, for wear or damage, and replacement of the fuel control if an unserviceable condition

exists. The proposed AD would also require eventual replacement of affected fuel controls with an improved fuel control, which better accommodates drive spline failure by eliminating the overspeed condition. This remove and replace requirement is a terminating action to inspections for all installations. However, for the optional method of compliance explained in paragraph (I), for agricultural operations, removal and replacement is not required, as discussed below.

Agricultural operations at low altitude and heavy loads place special demands on aircraft operating in that environment. For example, high power and, therefore, high fuel flow, is necessary for an aircraft engaged in agricultural spraying to avoid power lines, utility poles, trees, and buildings (including silos). We consider a sudden power loss or inability to maintain altitude close to the ground more hazardous than managing an engine overspeed and overtorque event. Operations other than agricultural operations, are not exposed to these hazards. Therefore, we propose to allow continued use of existing fuel control assemblies in agricultural operations, and control the rate of failure with a repetitive inspection program for those limited number of engines.

The Agency is committed to updating the aviation community of expected costs associated with the MU-2B series airplane safety evaluation conducted in 2005. As a result of that commitment, the accumulating expected costs of all ADs related to the MU-2B series airplane safety evaluation may be found at the following Web site: http://www.faa.gov/aircraft/air_cert/design_approvals/small_airplanes/cos/mu2_foia_reading_library/.

Relevant Service Information

We have reviewed and approved the technical contents of Honeywell International Inc. Alert Service Bulletin (ASB) No. TPE331-A73-0254, Revision 2, dated June 17, 2005; ASB No. TPE331-A73-0262, Revision 2, dated June 17, 2005; and ASB No. TPE331-A73-0271, Revision 1, dated January 25, 2006, that describe procedures for replacing affected fuel control assemblies with serviceable modified fuel control assemblies. Also we have reviewed the dimensional inspection requirements of the fuel control/fuel pump mating splines in the applicable maintenance manuals.

Differences Between the Proposed AD and the Manufacturer's Service Information

This proposed AD adds a compliance time of no later than December 31, 2012. Also, this proposed AD provides repetitive inspection requirements as an optional method of compliance to installing modified fuel control assemblies for single-engine airplanes used for agricultural operations.

FAA's Determination and Requirements of the Proposed AD

We have evaluated all pertinent information and identified an unsafe condition that is likely to exist or develop on other products of this same type design. We are proposing this AD, which would require:

- Performing initial and repetitive fuel control/fuel pump mating spline inspections.
- Replacing the Woodward fuel control assemblies listed by part number in the compliance section, with serviceable modified fuel control assemblies with improved overspeed protection, the next time the fuel control assembly is removed, but not later than December 31, 2012.
- As an optional method of compliance, performing repetitive fuel control/fuel pump mating spline inspections for engines installed on single-engine airplanes used for agricultural operations without having to install a modified fuel control.

Costs of Compliance

We estimate this proposed AD would affect 3,250 engines installed on airplanes of U.S. registry. We also estimate it would take about one work hour per engine to replace the fuel control assembly during a normal scheduled overhaul. We also estimate it would take about three work hours to perform a dimensional inspection of the fuel control/fuel pump mating splines. The average labor rate is \$65 per work hour. A replacement fuel control assembly would cost about \$9,700 per engine. We estimate that on each engine one fuel control inspection would be performed, and each engine would have the fuel control replaced. Based on these figures, we estimate the total cost of the proposed AD to U.S. operators to be \$32,370,000.

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 proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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 the proposed regulation:

1. Is not a "significant regulatory action" under Executive Order 12866;
2. Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and
3. Would 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 regulatory evaluation of the estimated costs to comply with this proposed AD. See the **ADDRESSES** section for a location to examine the regulatory evaluation.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

The Proposed Amendment

Under the authority delegated to me by the Administrator, the Federal Aviation Administration proposes to amend 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:

Honeywell International Inc. (formerly AlliedSignal Inc., Garrett Engine

Division; Garrett Turbine Engine Company; and AiResearch Manufacturing Company of Arizona:
Docket No. FAA-2006-23706;
Directorate Identifier 2006-NE-03-AD.

Comments Due Date

(a) The Federal Aviation Administration (FAA) must receive comments on this

airworthiness directive (AD) action by May 8, 2006.

Affected ADs

(b) None.

Applicability

(c) This AD applies to Honeywell International Inc. TPE331-1, -2, -2UA, -3U,

-3UW, -5, -5A, -5AB, -5B, -6, -6A, -10, -10AV, -10GP, -10GT, -10P, -10R, -10T, -10U, -10UA, -10UF, -10UG, -10UGR, -10UR, -11U, -12JR, -12UA, -12UAR, and -12UHR turboprop engines with the part numbers (P/Ns) of Woodward fuel control assemblies listed in this AD, installed. These engines are installed on, but not limited to, the following airplanes:

Manufacturer	Model
AERO PLANES, LLC (formerly McKinnon Enterprises)	G-21G.
ALLIED AG CAT PRODUCTIONS (formerly Schweizer)	G-164 SERIES.
AYRES	S-2R SERIES.
BRITISH AEROSPACE LTD (formerly Jetstream)	3101 AND 3201 SERIES, AND HP.137 JETSTREAM MK.1.
CONSTRUCCIONES AERONAUTICAS, S.A. (CASA)	C-212 SERIES.
DEHAVILLAND	DH104 SERIES 7AXC (DOVE).
DORNIER	228 SERIES.
FAIRCHILD	SA226 AND SA227 SERIES (SWEARINGEN MERLIN AND METRO SERIES).
GRUMMAN AMERICAN	G-164 SERIES.
MITSUBISHI	MU-2B SERIES (MU-2 SERIES).
PILATUS	PC-6 SERIES (FAIRCHILD PORTER AND PEACEMAKER).
POLSKIE ZAKLADY LOTNICZE SPOLKA (formerly Wytownia Sprzetu Komunikacyjnego).	PZL M18, PZL M18A, PZL M18B.
PROP-JETS, INC	400.
RAYTHEON AIRCRAFT (formerly Beech)	C45G, TC-45G, C-45H, TC-45H, Tc-45J. G18S, E18S-9700, D18S, D18C, H18, RC-45J, JRB-6, UC-45J, 3N, 3NM, 3TM, B100, C90 AND E90.
SHORTS BROTHERS AND HARLAND, LTD	SC7 (SKYVAN) SERIES.
THRUSH (ROCKWELL COMMANDER)	S-2R.
TWIN COMMANDER (JETPROP COMMANDER)	680, 690 AND 695 SERIES.

Unsafe Condition

(d) This AD results from reports of loss of the drive between the fuel pump and fuel control, leading to engine overspeed, overtorque, overtemperature, uncontained rotor failure, and asymmetric thrust in multi-engine airplanes. We are issuing this AD to prevent rapid, uncommanded, uncontrolled increase in fuel flow to the engine, asymmetric thrust, uncontained rotor failure, and damage to the airplane.

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.

Initial Inspection

(f) At the next scheduled inspection of the fuel control assembly and fuel pump mating splines, but within 1,000 hours-in-service after the effective date of this AD:

(1) Perform an initial dimensional inspection of the splines between the fuel pump and fuel control, for wear or damage. Information on spline inspection can be found in Section 72-00-00 of the applicable maintenance manuals.

(2) Repair or replace the fuel control assembly if the splines fail the dimensional inspection, with any serviceable fuel control assembly.

Repetitive Inspections

(g) Thereafter, within 1,000 hours since-last-inspection:

(1) Perform repetitive dimensional inspections of the splines between the fuel pump and fuel control, for wear or damage. Information on spline inspection can be

found in Section 72-00-00 of the applicable maintenance manuals.

(2) Repair or replace the fuel control assembly if the splines fail the dimensional inspection, with any serviceable fuel control assembly.

TPE331-1, -2, and -2UA Series Engines

(h) For TPE331-1, -2, and -2UA series engines, replace Woodward fuel control assemblies, P/Ns 869199-13/-20/-21/-22/-23/-24/-25/-26/-27/-28/-29/-31/-32/-33/-34 and -35, with a serviceable, modified fuel control assembly the next time the fuel control assembly is removed for cause that requires return, or when the fuel control assembly requires overhaul, but not later than December 31, 2012. Information on replacement fuel control assembly P/Ns, configuration management, rework, and replacement information, can be found in Honeywell Alert Service Bulletin (ASB) No. TPE331-A73-0271, Revision 1, dated January 25, 2006.

TPE331-3U, -3UW, -5, -5A, -5AB, -5B, -6, -6A, -10AV, -10GP, -10GT, -10P, and -10T Series Engines

(i) For TPE331-3U, -3UW, -5, -5A, -5AB, -5B, -6, -6A, -10AV, -10GP, -10GT, -10P, and -10T series engines, replace Woodward fuel control assemblies, P/Ns 893561-7/-8/-9/-10/-11/-14/-15/-16/-20/-26/-27 and -29, and P/Ns 897770-1/-3/-7/-9/-10/-11/-12/-14/-15/-16/-25/-26 and -28, with a serviceable, modified fuel control assembly the next time the fuel control assembly is removed for cause that requires return, or when the fuel control assembly requires overhaul, but not later than December 31, 2012. Information on

replacement fuel control assembly P/Ns, configuration management, rework, and replacement information, can be found in Honeywell ASB No. TPE331-A73-0262, Revision 2, dated June 17, 2005.

TPE331-10, -10R, -10U, -10UA, -10UF, -10UG, -10UGR, -10UR, -11U, -12JR, -12UA, -12UAR, and -12UHR Series Engines

(j) For TPE331-10, -10R, -10U, -10UA, -10UF, -10UG, -10UGR, -10UR, -11U, -12JR, -12UA, -12UAR, and -12UHR series engines, replace Woodward fuel control assemblies, P/Ns 897375-2/-3/-4/-5/-8/-9/-10/-11/-12/-13/-14/-15/-16/-17/-19/-21/-24/-25/-26 and -27, and P/Ns 897780-1/-2/-3/-4/-5/-6/-7/-8/-9/-10/-11/-14/-15/-16/-17/-18/-19/-20/-21/-22/-23/-24/-25/-26/-27/-30/-32/-34/-36/-37 and -38, and P/Ns 893561-17/-18 and -19, with a serviceable, modified fuel control assembly the next time the fuel control assembly is removed for cause that requires return, or when the fuel control assembly requires overhaul, but not later than December 31, 2012. Information on replacement fuel control assembly P/Ns, configuration management, rework, and replacement information, can be found in Honeywell ASB TPE331-A73-0254, Revision 2, dated June 17, 2005.

Definitions

(k) For the purposes of this AD:

(1) A serviceable, modified fuel control assembly for engines affected by paragraph (h), (i), or (j) of this AD, is a fuel control assembly with a P/N not listed in this AD.

(2) A removal for cause that requires return, for engines affected by paragraph (h),

(i), or (j) of this AD, is a fuel control assembly that has displayed an unserviceable or unacceptably operating condition requiring the fuel control to be removed and sent to a repair or overhaul shop.

Optional Method of Compliance for TPE331 Series Engines Installed On Single-Engine Airplanes Used for Agricultural Operations

(l) As an optional method of compliance to paragraph (h), (i), or (j), for TPE331 series engines installed on single-engine airplanes used for agricultural operations, having an affected Woodward fuel control assembly:

- (1) Continue repetitive dimensional inspections of the splines between the fuel pump and fuel control, for wear or damage as specified in paragraph (g) of this AD.
- (2) Repair or replace the fuel control assembly if the splines fail the dimensional inspection, with any serviceable fuel control assembly.
- (3) Installation of a serviceable, modified fuel control assembly is not required.

Terminating Action

(m) Performing a fuel control assembly replacement as specified in paragraph (h), (i), or (j) of this AD, is terminating action for the initial and repetitive inspections required by this AD.

Alternative Methods of Compliance

(n) The Manager, Los Angeles Aircraft 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

(o) None.

Issued in Burlington, Massachusetts, on March 2, 2006.

Peter A. White,

Acting Manager, Engine and Propeller Directorate, Aircraft Certification Service.
[FR Doc. E6-3260 Filed 3-7-06; 8:45 am]

BILLING CODE 4910-13-P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2006-24101; Directorate Identifier 2005-NM-103-AD]

RIN 2120-AA64

Airworthiness Directives; Sandel Avionics Incorporated Model ST3400 Terrain Awareness Warning System/ Radio Magnetic Indicator Approved Under Technical Standard Order(s) C113, C151a, or C151b; Installed on Various Small and Transport Category Airplanes

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

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to adopt a new airworthiness directive (AD). The new AD is for Sandel Avionics Incorporated Model ST3400 terrain awareness warning systems/radio magnetic indicator (TAWS/RMI) units as described above. This proposed AD would require installing a warning placard on the TAWS/RMI, installing upgraded software in the TAWS/RMI, revising the limitations section of the Airplane Flight Manual (AFM), and removing the placard and AFM revision after installing the software. This proposed AD results from a report that an in-flight bearing error occurred in a Model ST3400 TAWS/RMI, due to a combination of input signal fault and software error. We are proposing this AD to prevent a bearing error, which could lead to an airplane departing from its scheduled flight path, which could result in a reduction in separation from, and a possible collision with, other aircraft or terrain.

DATES: We must receive comments on this proposed AD by April 24, 2006.

ADDRESSES: Use one of the following addresses to submit comments on this proposed AD.

- DOT Docket Web site: Go to <http://dms.dot.gov> and follow the instructions for sending your comments electronically.
 - Government-wide rulemaking Web site: Go to <http://www.regulations.gov> and follow the instructions for sending your comments electronically.
 - Mail: Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, room PL-401, Washington, DC 20590.
 - Fax: (202) 493-2251.
 - Hand Delivery: Room PL-401 on the plaza level of the Nassif Building, 400 Seventh Street, SW., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.
- Contact Sandel Avionics Incorporated (Sandel), 2401 Dogwood Way, Vista, California 92083, for the service information identified in this proposed AD.

FOR FURTHER INFORMATION CONTACT: Ha A. Nguyen, Aerospace Engineer, Systems and Equipment Branch, ANM-130L, FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712-4137; telephone (562) 627-5335; fax (562) 627-5210.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to submit any relevant written data, views, or arguments

regarding this proposed AD. Include the docket number "FAA-2006-24101; Directorate Identifier 2005-NM-103-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of the proposed AD. We will consider all comments received by the closing date and may amend the proposed AD in light of those comments.

We will post all comments we receive, without change, to <http://dms.dot.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact with FAA personnel concerning this proposed AD. Using the search function of that Web site, anyone can find and read the comments in any of our dockets, including the name of the individual who sent the comment (or signed the comment on behalf of an association, business, labor union, etc.). You may review DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (65 FR 19477-78), or you may visit <http://dms.dot.gov>.

Examining the Docket

You may examine the AD docket on the Internet at <http://dms.dot.gov>, or in person at the Docket Management Facility office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Management Facility office (telephone (800) 647-5227) is located on the plaza level of the Nassif Building at the DOT street address stated in the **ADDRESSES** section. Comments will be available in the AD docket shortly after the Docket Management System receives them.

Discussion

We have received a report indicating that an in-flight bearing error occurred in a Sandel Avionics Incorporated (Sandel) Model ST3400 terrain awareness warning systems/radio magnetic indicator (TAWS/RMI) installed on a Raytheon Model HS.125 series 700A airplane, due to a combination of input signal fault and software error. A similar fault could occur in any such TAWS/RMI that is configured for COMPOSITE NAV and has software installed that is at revision 3.05 or A3.05 or earlier. This condition, if not corrected, could lead to an airplane departing from its scheduled flight path, which could result in a reduction in separation from and a possible collision with other aircraft or terrain.