
Sektion 2. Utlandstillverkad flygmateriel

TITEL: "SOAP" Provtagning av oljor och filter samt inspektion av växellådskomponenter

GÄLLER: Honeywell International Inc. TPE331-11U, -12B, -12JR, 12 UA, -12UAR och -12UHR

ÅTGÄRD: Utför åtgärder enligt bifogad kopia av FAA AD 2002-12-09

TID FÖR ÅTGÄRD: Första åtgärd inom 80 - 120 gångtimmar från detta LVD:s beslutsdatum

UNDERLAG: FAA AD 2002-12-09 och där angivet underlag

REFERENS: FAA AD 2002-12-09

BESLUTSDATUM: 3 juli 2002

LFS 2002:95

Åtgärder enligt LVD utgör nödvändig förutsättning för ifrågavarande flygmateriels luftvärdighet. Referens BCL M 1.11.
Anteckning om åtgärd, som vidtagits i enlighet med LVD, skall införas i teknisk journal för berörd flygmateriel med hänvisning till ifrågavarande LVD-nummer. Angivet underlag refererar till senast gällande revision/utgåva. LVD utges i luftfartsverkets författningssamlingar LFS.

Postadress	Gatuadress	Telefonnummer	Faxnummer	Telegram	Telex
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AIRWORTHINESS DIRECTIVE

Aircraft Certification Service
Washington, DC



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

We post ADs on the internet at "www.airweb.faa.gov/rgl"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2002-12-09 Honeywell International Inc.: Amendment 39-12781. Docket No. 2001-NE-39-AD.

Applicability: This airworthiness directive (AD) is applicable to Honeywell International Inc. (formerly AlliedSignal Inc. and Garrett Turbine Engine Company) TPE331-11U, -12B, -12JR, -12UA, -12UAR, and -12UHR series turboprop engines. These engines are installed on, but not limited to, Fairchild SA227 series (Metro), and Jetstream 3201 series airplanes.

Note 1: This 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 (i) 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

Compliance with this AD is required as indicated, unless already done.

To prevent bull gear rim separations and high-speed pinion (HSP) assembly failures from abnormal gear wear, which could result in uncontained gearbox fragmentation, in-flight shutdowns, engine rotor overspeed events, do the following:

(a) Except for the TPE331-12JR engine series, submit Spectrometric Oil Analysis Program (SOAP) samples of the oil and filter to Honeywell approved labs in accordance with Paragraph 2. A. (1) of the Accomplishment Instructions of Honeywell International Inc. Alert Service Bulletin (ASB) TPE331-A79-0034 Revision 3 dated October 3, 2001 or Revision 4 dated April 5, 2002, at 80 to 120 hours time-in-service (TIS) after the effective date of this AD and at 80 to 120 hour TIS intervals thereafter.

(b) If either of the following conditions occur, make the necessary repairs in accordance with Paragraph 2.A.(3)(b)1 or 2.A.(3) of the Accomplishment Instructions of Honeywell International Inc. ASB TPE331-A79-0034 Revision 3, dated October 3, 2001; or Revision 4, dated April 5, 2002, within 50 hours TIS after receiving the results from the unacceptable sample analysis or trend assessment:

(1) If the SOAP test lab sample is determined to be unacceptable in accordance with Paragraph 2.A.(2)(b)1 in the Accomplishment Instructions of Honeywell International Inc. ASB TPE331-A79-0034 Revision 3 dated October 3, 2001 or Revision 4 dated April 5, 2002, or

(2) If Honeywell's supplementary trend assessment is unacceptable in accordance with Paragraph 2.A.(3) in the Accomplishment Instructions of Honeywell International Inc. ASB TPE331-A79-0034 Revision 3 dated October 3, 2001; or Revision 4 dated April 5, 2002.

TPE331-12UA, -12UAR, and -12UHR Engine Maintenance

(c) On TPE331-12UA, -12UAR, and -12UHR engines, inspect, replace, and if necessary, rework specified gearbox components as follows:

(1) At the next turbine (hot) section inspection, gearbox inspection, engine overhaul, or when the gearbox diaphragm module is out of the engine, whichever occurs first, after the effective date of this AD, comply with the following:

(i) Paragraphs 2.A. (2) through 2.A. (11) of the Accomplishment Instructions of Honeywell International Inc. ASB TPE331-A72-2087, Revision 1, dated November 16, 2001 or ASB TPE331-A72-2087, dated October 10, 2001.

(ii) Paragraphs 2.A. (2) through 2.A. (8) of the Accomplishment Instructions of Honeywell International Inc. SB TPE331-72-2090RWK, dated October 10, 2001.

(iii) Paragraphs 2.A. (2) through 2.D. (4) of the Accomplishment Instructions of Honeywell International Inc. SB TPE331-72-2091RWK, dated October 10, 2001.

(2) Thereafter, do the following:

(i) Inspect for wear and replace gearbox components and comply with limitations on interchangeability in accordance with Paragraphs 2.B. and 2.C. (2) through 2.C. (13) of the Accomplishment Instructions of Honeywell International Inc. ASB TPE331-A72-2087, Revision 1, dated November 16, 2001 or ASB TPE331-A72-2087, dated October 10, 2001 at intervals not to exceed 3,600 hours TIS since the last replacement of the bull gear, part number (P/N) 3108295-1, and the HSP, P/N 3101741-2, or since the last overhaul of the diaphragm matched housing set, whichever occurs first.

(ii) Comply with limitations on interchangeability in accordance with Paragraph 2.B. of the Accomplishment Instructions of Honeywell International Inc. ASB TPE331-A72-2087, Revision 1, dated November 16, 2001 or ASB TPE331-A72-2087, dated October 10, 2001 whenever certain gearbox parts, identified in Paragraph 2.B. of ASB TPE331-A72-2087, are removed from the engine following compliance with paragraph (c)(1) or (c)(2)(i) of this AD.

(iii) Comply with limitations on interchangeability and inspect for wear in accordance with Paragraphs 2.B. and 2.D. of the Accomplishment Instructions of Honeywell International Inc. ASB TPE331-A72-2087, Revision 1, dated November 16, 2001 or ASB TPE331-A72-2087, dated October 10, 2001 whenever the engine is removed from the aircraft and disassembled to the extent that the diaphragm module is accessed after 500 hours TIS following compliance with paragraph (c)(1) or (c)(2)(i) of this AD.

TPE331-12B Engines

(d) On TPE331-12B engines, inspect, replace, and if necessary, rework specified gearbox components as follows:

(1) At the next engine overhaul or when the bull gear first requires replacement, whichever occurs first, after the effective date of this AD, comply with the following:

(i) Paragraphs 2.A. (2) through 2.A. (11) of the Accomplishment Instructions of Honeywell International Inc. ASB TPE331-A72-2092, Revision 1, dated November 16, 2001 or ASB TPE331-A72-2092, dated October 10, 2001.

(ii) Paragraphs 2.A. (2) through 2.A. (8) of the Accomplishment Instructions of Honeywell International Inc. SB TPE331-72-2094RWK, dated October 10, 2001.

(iii) Paragraphs 2.A. (2) through 2.C. (4) of the Accomplishment Instructions of Honeywell International Inc. SB TPE331-72-2095RWK, dated October 10, 2001.

(2) Thereafter, do the following:

(i) Inspect for wear and replace gearbox components and comply with limitations on interchangeability in accordance with Paragraphs 2.B. and 2.C. (2) through 2.C. (13) of the Accomplishment Instructions of Honeywell International Inc. ASB TPE331-A72-2092, Revision 1, dated November 16, 2001 or ASB TPE331-A72-2092, dated October 10, 2001, at intervals not to exceed 3,100 hours TIS since the last replacement of the bull gear, P/N 3108296-1, and the HSP, P/N 3101741-4, or since the last overhaul of the diaphragm matched housing set, whichever occurs first.

(ii) Comply with limitations on interchangeability in accordance with Paragraph 2.B. of the Accomplishment Instructions of Honeywell International Inc. ASB TPE331-A72-2092, Revision 1, dated November 16, 2001 or ASB TPE331-A72-2092, dated October 10, 2001, whenever certain gearbox parts, identified in Paragraph 2.B. of ASB TPE331-A72-2092, are removed from the engine following compliance with paragraph (d)(1) or (d)(2)(i) of this AD.

(iii) Comply with limitations on interchangeability and inspect for wear in accordance with Paragraphs 2.B. and 2.D. of the Accomplishment Instructions of Honeywell International Inc. ASB TPE331-A72-2092, Revision 1, dated November 16, 2001 or ASB TPE331-A72-2092, dated October 10, 2001, whenever the engine is removed from the aircraft and disassembled to the extent that the diaphragm module is accessed after 500 hours TIS following compliance with paragraphs (d)(1) or (d)(2)(i) of this AD.

TPE331-11U Engines With Bull Gear P/N 3107161-1

(e) On TPE331-11U engines with bull gear P/N 3107161-1, inspect, replace and if necessary, rework specified gearbox components as follows:

(1) At the next hot section inspection, gearbox inspection, engine overhaul, or when the gearbox diaphragm module is out of the engine, whichever occurs first after the effective date of this AD, comply with the following:

(i) Paragraphs 2.A. (2) through 2.A. (11) of the Accomplishment Instructions of Honeywell International Inc. ASB TPE331-A72-2088, Revision 2, dated February 20, 2002, Revision 1, dated November 16, 2001, or original, dated October 10, 2001.

(ii) Paragraphs 2.A. (2) through 2.A. (8) of the Accomplishment Instructions of Honeywell International Inc. SB TPE331-72-2090RWK, dated October 10, 2001.

(iii) Paragraphs 2.A. (2) through 2.D. (4) of the Accomplishment Instructions of Honeywell International Inc. SB TPE331-72-2091RWK, dated October 10, 2001.

(2) Thereafter, do the following:

(i) Inspect for wear and replace gearbox components and comply with limitations on interchangeability in accordance with Paragraphs 2.B. and C. (2) through C. (13) of the Accomplishment Instructions of Honeywell International Inc. ASB TPE331-A72-2088, Revision 2, dated February 20, 2002, Revision 1, dated November 16, 2001 or original, dated October 10, 2001, at intervals not to exceed 9,000 hours time-in-service (TIS) since the last replacement of the bull gear, P/N 3108295-1, and the HSP, P/N 3101741-2, or since the last overhaul of the diaphragm matched housing set, whichever occurs first.

(ii) Comply with limitations on interchangeability in accordance with Paragraph 2.B. of the Accomplishment Instructions of Honeywell International Inc. ASB TPE331-A72-2088, Revision 2, dated February 20, 2002, Revision 1, dated November 16, 2001, or original, dated October 10, 2001, whenever certain gearbox parts, identified in Paragraph 2.B. of ASB TPE331-A72-2088, are removed from the engine following compliance with Paragraph (e)(1) or (e)(2)(i) of this AD.

(iii) Comply with limitations on interchangeability and inspect for wear in accordance with Paragraphs 2.B. and 2.D. of the Accomplishment Instructions of Honeywell International Inc. ASB TPE331-A72-2088, Revision 2, dated February 20, 2002, Revision 1, dated November 16, 2001, or original, dated October 10, 2001 whenever the engine is removed from the aircraft and disassembled to the extent that the diaphragm module is accessed after 500 hours TIS following compliance with paragraph (e)(1) or (e)(2)(i) of this AD.

All Other TPE331-11U Engines Without Bull Gear P/N 3107161-1

(f) On TPE331-11U engines, that do not have a bull gear, P/N 3107161-1, inspect, replace, and if necessary, rework specified gearbox components as follows:

(1) At the next gearbox inspection, engine overhaul, or when the gearbox diaphragm module is out of the engine, whichever occurs first after the effective date of this AD, comply with the following:

(i) Paragraphs 2.A. (2) through 2.A. (11) of the Accomplishment Instructions of Honeywell International Inc. ASB TPE331-A72-2088, Revision 2, dated February 20, 2002, Revision 1, dated November 16, 2001, or original, dated October 10, 2001.

(ii) Paragraphs 2.A. (2) through 2.A. (8) of the Accomplishment Instructions of Honeywell International Inc. SB TPE331-72-2090RWK, dated October 10, 2001.

(iii) Paragraphs 2.A. (2) through 2.D. (4) of the Accomplishment Instructions of Honeywell International Inc. SB TPE331-72-2091RWK, dated October 10, 2001.

(2) Thereafter, do the following:

(i) Inspect for wear and replace gearbox components and comply with limitations on interchangeability in accordance with Paragraphs 2.B. and 2.C. (2) through 2.C. (13) of the Accomplishment Instructions of Honeywell International Inc. ASB TPE331-A72-2088, Revision 2, dated February 20, 2002, Revision 1, dated November 16, 2001, or original, dated October 10, 2001, at intervals not to exceed 9,000 hours TIS since the last replacement of the bull gear, P/N 3108295-1, and the HSP, P/N 3101741-2, or since the last overhaul of the diaphragm matched housing set, whichever occurs first.

(ii) Comply with limitations on interchangeability in accordance with Paragraph 2.B. of the Accomplishment Instructions of Honeywell International Inc. ASB TPE331-A72-2088, Revision 2, dated February 20, 2002, Revision 1, dated November 16, 2001, or original, dated October 10, 2001, whenever certain gearbox parts, identified in Paragraph 2.B. of ASB TPE331-A72-2088, are removed from the engine following compliance with Paragraph (f)(1) or (f)(2)(i) of this AD.

(iii) Comply with limitations on interchangeability and inspect for wear in accordance with Paragraphs 2.B. and 2.D. of the Accomplishment Instructions of Honeywell International Inc. ASB TPE331-A72-2088, Revision 2, dated February 20, 2002, Revision 1, dated November 16, 2001, or original, dated October 10, 2001, whenever the engine is removed from the aircraft and disassembled to the extent that the diaphragm module is accessed after 500 hours TIS following compliance with paragraph (f)(1) or (f)(2)(i) of this AD.

TPE331-12JR Engines

(g) On TPE331-12JR engines, inspect, replace, and if necessary, rework specified gearbox components as follows:

(1) At the next gearbox inspection, engine overhaul, or when the bull gear requires replacement, whichever occurs first, comply with the following:

(i) Paragraphs 2.A. (2) through 2.A. (11) of the Accomplishment Instructions of Honeywell International Inc. ASB TPE331-A72-2093, Revision 1, dated November 16, 2001 or ASB TPE331-A72-2093, dated October 10, 2001.

(ii) Paragraphs 2.A. (2) through 2.A. (8) of the Accomplishment Instructions of Honeywell International Inc. SB TPE331-72-2090RWK, dated October 10, 2001.

(iii) Paragraphs 2.A. (2) through 2.D. (4) of the Accomplishment Instructions of Honeywell International Inc. SB TPE331-72-2091RWK, dated October 10, 2001.

(2) Thereafter, do the following:

(i) Inspect for wear and replace gearbox components and comply with limitations on interchangeability in accordance with Paragraphs 2.B. and 2.C. (2) through C. (13) of the Accomplishment Instructions of Honeywell International Inc. ASB TPE331-A72-2093, Revision 1, dated November 16, 2001 or ASB TPE331-A72-2093, dated October 10, 2001, at intervals not to exceed 5,100 hours TIS since the last replacement of the bull gear, P/N 3108295-1, and the HSP, P/N 3101741-2, or since the last overhaul of the diaphragm matched housing set, whichever occurs first.

(ii) Comply with limitations on interchangeability in accordance with Paragraph 2.B. of the Accomplishment Instructions of Honeywell International Inc. ASB TPE331-A72-2093, Revision 1, dated November 16, 2001 or ASB TPE331-A72-2093, dated October 10, 2001, whenever certain gearbox parts, identified in Paragraph 2.B. of ASB TPE331-A72-2093, are removed from the engine following compliance with Paragraph (g)(1) or (g)(2)(i) of this AD.

(iii) Comply with limitations on interchangeability and inspect for wear in accordance with Paragraphs 2.B. and 2.D. of the Accomplishment Instructions of Honeywell International Inc. ASB TPE331-A72-2093, Revision 1, dated November 16, 2001 or ASB TPE331-A72-2093, dated October 10, 2001, whenever the engine is removed from the aircraft and disassembled to the extent that the diaphragm module is accessed after 500 hours TIS following compliance with paragraph (g)(1) or (g)(2)(i) of this AD.

Definitions

(h) For the purposes of this AD, as stated in the incorporated service bulletins, the word "scrap" must be interpreted as "not serviceable." Any reference in these bulletins to the intentional damage of gear teeth is not mandatory.

Alternative Methods of Compliance

(i) 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, Los Angeles Aircraft Certification Office (LAACO). Operators must submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, LAACO.

Note 2: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the LAACO.

Special Flight Permits

(j) Special flight permits may be issued in accordance with Secs. 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 done.

Documents That Have Been Incorporated by Reference

(k) The actions required by this AD must be done in accordance with the following Honeywell International Inc. Service Bulletins (SB's):

Document No.	Pages	Revision	Date
ASB TPE331-A79-0034	1	4	April 5, 2002.
	2	2	July 23, 2001.
	3-5	3	October 2, 2001.
	6-7	4	April 5, 2002.
Total pages: 10	8-10	3	October 2, 2001.
ASB TPE331-A79-0034	1	3	October 2, 2001.
	2	2	July 23, 2001.
Total pages: 10	3-10	3	October 2, 2001.
ASB TPE331-A72-2087	1	1	November 16, 2001.
	2-3	Original	October 10, 2001.
	4-6	1	November 16, 2001.
	7-9	Original	October 10, 2001.
	10	1	November 16, 2001.
	11-13	Original	October 10, 2001.
	14-15	1	November 16, 2001.
	16	Original	October 10, 2001.
	17	1	November 16, 2001.
Total pages: 18	18	Original	October 10, 2001.
ASB TPE331-A72-2087	All	Original	October 10, 2001.
Total pages: 18			
ASB TPE331-A72-2088	1	2	February 20, 2002.
	2	Original	October 10, 2001.
	3-5	1	November 16, 2001.
	6-7	Original	October 10, 2001.
	8	2	February 20, 2002.
	9-11	Original	October 10, 2001.
	12	1	November 16, 2001.
	13	2	February 20, 2002.
	14	Original	October 10, 2001.
	15	1	November 16, 2001.
Total pages: 16	16	Original	October 10, 2001.
ASB TPE331-A72-2088	1	1	November 16, 2001.
	2	Original	October 10, 2001.
	3-5	1	November 16, 2001.
	6-7	Original	October 10, 2001.
	8	1	November 16, 2001.
	9-11	Original	October 10, 2001.
	12-13	1	November 16, 2001.
	14	Original	October 10, 2001.
	15	1	November 16, 2001.
Total pages: 16	16	Original	October 10, 2001.
ASB TPE331-A72-2088	All	Original	October 10, 2001.
Total pages: 16			
SB TPE331-72-2090RWK	All	Original	October 10, 2001.
Total pages: 10			
SB TPE331-72-2091RWK	All	Original	October 10, 2001.
Total pages: 12			

ASB TPE331-A72-2092	1	1	November 16, 2001.
	2	Original	October 10, 2001.
	3-5	1	November 16, 2001.
	6-7	Original	October 10, 2001.
	8	1	November 16, 2001.
	9-11	Original	October 10, 2001.
	12	1	November 16, 2001.
	13	Original	October 10, 2001.
	14	1	November 16, 2001.
	15	Original	October 10, 2001.
	16	1	November 16, 2001.
	Total pages: 18	17-18	Original
	ASB TPE331-A72-2092	All	Original
	Total pages: 18		October 10, 2001.
	ASB TPE331-A72-2093	1	November 16, 2001.
	2	Original	October 10, 2001.
	3-4	1	November 16, 2001.
	5-7	Original	October 10, 2001.
	8	1	November 16, 2001.
	9-11	Original	October 10, 2001.
	12-13	1	November 16, 2001.
	14	Original	October 10, 2001.
	15	1	November 16, 2001.
	Total pages: 16	16	Original
	ASB TPE331-A72-2093	All	Original
	Total pages: 16		October 10, 2001.
	SB TPE331-72-2094RWK	All	Original
	Total pages: 8		October 10, 2001.
	SB TPE331-72-2095RWK	All	Original
	Total pages: 8		October 10, 2001.

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 Honeywell Engines, Systems and Services, Technical Data Distribution, M/S 2101-201, P.O. Box 29003, Phoenix, AZ 85038-9003; telephone: (602) 365-2493 (General Aviation), (602) 365-5535 (Commercial); fax: (602) 365-5577 (General Aviation and Commercial). Copies may be inspected, by appointment, at the FAA, New England Region, Office of the Regional 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.

Effective Date

(1) This amendment becomes effective on July 3, 2002.

Issued in Burlington, Massachusetts, on June 5, 2002.

Francis A. Favara,

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

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