


EASA	AIRWORTHINESS DIRECTIVE
	AD No: 2005-0011 Issued/Date: 01 April 2005

No person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of that Airworthiness Directive unless otherwise agreed with the Authority of the State of Registry.

Type Approval Holder's Name: Honeywell International Inc.	Type/Model designation(s): TPE331-12UA, -12UAR and -12UHR engines
TCDS Number: FAA E4WE	
Foreign AD No: See Compliance Note	
Supersedure: None	

ATA 72	Engine Reduction Gear and Shaft Section - Modification
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Manufacturer(s):	Honeywell International Inc.
Applicability:	Honeywell International Inc. TPE331-12UA, -12UAR and -12UHR engines installed in BAE Jetstream 32 series and Fairchild SA 227 (Metro) series aircraft.
Reason:	There have been 20 reported bull gear rim or web separations and 13 high speed pinion torque shaft failures on TPE331-12UAR/UHR engines. Sixteen of the bull gear failures resulted in an in-flight shut down and three of these were on engines which were in compliance with FAA AD 2002-12-09. In 13 events, the gearbox was pierced by gear fragments and in four of these incidents gear debris was ejected from the right hand engine, struck by the propeller and impacted the aircraft fuselage. In one of these events a bull gear fragment penetrated the cabin. Compliance with this Airworthiness Directive is required to prevent bull gear failures that could result in penetration of the aircraft fuselage by gear fragments and possible injury to cabin occupants.
Approval number, date	2005-2777, 31 March 2005
Effective Date:	01 April 2005
Compliance:	1. For engines operated on the left side of the aircraft (looking from the rear). <ul style="list-style-type: none"> A. Engines Pre SB TPE331-A72-2087 Required at next turbine (hot) section inspection, gearbox inspection, engine overhaul, or when the diaphragm assembly is out of the engine, whichever occurs first after the effective date of this AD. Modify the engine reduction gear and shaft section by replacing the intermediate housing and gear (diaphragm) assembly in accordance with Honeywell International Inc. Service Bulletin TPE331-A72-2114 paragraph 2.A. B. Engines Post SB TPE331-A72-2087

	<p>(i) Required not later than 3600 hours time in service of bull gear part no. 3108295-1 and high speed pinion part no. 3101741-2 or since overhaul of diaphragm matched housing set part no. 3101540-8/-9. Make entries in the engine and applicable component maintenance record cards in accordance with Honeywell International Inc. Service Bulletin TPE331-A72-2114 paragraph 2.C.</p> <p>(ii) Required when unscheduled access to the diaphragm assembly occurs as defined in Honeywell International Inc. Service Bulletin TPE331-A72-2087 paragraph 2.D. Make entries in the engine and applicable component maintenance record cards in accordance with Honeywell International Inc. Service Bulletin TPE331-A72-2114 paragraph 2.C.</p> <p>(iii) Required not later than 7100 hours time in service of bull gear part no. 3108295-1 and high speed pinion part no. 3101741-2. Modify the engine reduction gear and shaft section by replacing the intermediate housing and gear (diaphragm) assembly in accordance with Honeywell International Inc. Service Bulletin TPE331-A72-2114 paragraph 2.A.</p> <p>2. For engines operated on the right side of the aircraft (looking from the rear).</p> <p>A. Required in accordance with paragraphs (i), (ii) or (iii) below, whichever occurs first. Modify the engine reduction gear and shaft section by replacing the intermediate housing and gear (diaphragm) assembly in accordance with Honeywell International Inc. Service Bulletin TPE331-A72-2114 paragraph 2.A.</p> <p>(i) at next turbine (hot) section inspection, gearbox inspection, engine overhaul, or when the diaphragm assembly is out of the engine, whichever occurs first.</p> <p>(ii) within 900 hours time in service of bull gear part no. 3102585-1, 3107118-1, 3108197-1, 3107161-1 or 3108295-1 and high speed pinion part no. 3101741-2 or 3108392-1, after the effective date of this AD.</p> <p>(iii) within 12 months after the effective date of this AD.</p> <p>NOTE: Compliance with this Airworthiness Directive provides a time extension and alternative means of compliance with FAA AD 2002-12-09 paragraph (c). Compliance with paragraph 1.A or 1.B(iii) or 2.A of this Airworthiness Directive provides terminating action for FAA AD 2002-12-09 paragraphs (a), (b) and (c).</p>
Ref. Publications:	Honeywell International Inc. Service Bulletins TPE331-A72-2114 and TPE331-A72-2087 may be obtained from Honeywell Engines, Systems and Services, Technical Data Distribution, M/S 2101-201, P.O. Box 29003, Phoenix, AZ 85038-9003, USA. Telephone: +1 602 365 2493 (General Aviation), +1 602 365 5535 (Commercial). Fax: +1 602 365 5577 (General Aviation and Commercial).
Remarks	This AD was posted as PAD 05-007 for consultation on 21 February 2005 with a comment period until 31 March 2005.

Only one editorial comment had been received and incorporated.

Enquiries regarding this Airworthiness Directive should be referred to:
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