EASA	AIRWORTHINESS DIRECTIVE
	AD No.: 2013-0199 **Date: 28 August 2013** Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EC) No 216/2008 on behalf of the European Community, its Member States and of the European third countries that participate in the activities of EASA under Article 66 of that Regulation.

This AD is issued in accordance with EU 748/2012, Part 21.A.3B. In accordance with EC 2042/2003 Annex I, Part M.A.301, the continuing airworthiness of an aircraft shall be ensured by accomplishing any applicable ADs. Consequently, no person may operate an aircraft to which an AD applies, except in accordance with the requirements of that AD, unless otherwise specified by the Agency [EC 2042/2003 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [EC 216/2008, Article 14(4) exemption].

Design Approval Holder's Name:	**Type/Model designation(s):**
GE Aviation Systems Ltd, trading as Dowty Propellers	R391 propellers

TCDS Number:	EASA.P.087
Foreign AD:	Not applicable
Supersedure:	None

ATA 61	**Propellers – Auxiliary Pump – Identification / Replacement**
Manufacturer(s):	GE Aviation Systems Ltd, trading as Dowty Propellers (formerly Dowty Rotol Ltd, Dowty Aerospace Propellers, Dowty Aerospace Gloucester or Dowty Propellers)
Applicability:	Model R391/6-132-F/10 and R391/6-132-F/3 propellers, all serial numbers. These propellers are known to be installed on, but not limited to, Alenia Aermacchi C-27J Spartan and Lockheed 382J (C-130J) aeroplanes.
Reason:	Dowty Propellers has observed an increasing trend of reduced Mean Time Between Failures (MTBF) of the Auxiliary Pump (AP). Root cause analysis has shown that the increasing trend has been associated with Auxiliary Pumps delivered as new or repaired from the year 2010 onwards. Investigation has shown that the failures are associated with brush and commutator wear in the AP motor, part number 666000522 (1-70B). It has been identified, that an unauthorised change was made to the material from which the motor brush is manufactured. This condition (in combination with other combined failure modes of the engine and propeller control system), if not detected and corrected, could lead to unexpected propeller behaviour, possibly resulting in damage to the aeroplane. For the reason describe above, this AD requires inspections of the brush and commutator wear in the AP motor and, depending on findings, replacement with serviceable parts.
Effective Date:	11 September 2013

<table>
<tr><td>Required Action(s) and Compliance Time(s):</td><td>
Required as indicated, unless accomplished previously:

(1) Within 100 flight hours (FH) after the effective date of this AD, identify the Part Number (P/N) and serial number (s/n) of the AP installed on the propeller and, if a P/N 697096001 or P/N 697065001 AP is installed with a s/n as listed in Appendix 1 of this AD, within the threshold indicated in Table 1, as applicable, remove the AP from the propeller and replace it with a serviceable AP in accordance with the instructions of Dowty Propellers Alert Service Bulletin (ASB) C27J-61-A50 and ASB C130J-61-A112, as applicable.

Note: The SBs recommend to return the removed APs to Dowty Propellers for brush replacement and recertification.

Table 1
<table>
<tr><th>Accumulated FH since new (first installation on a propeller) by the AP on the effective date of this AD</th><th>Removal threshold</th></tr>
<tr><td>Less than 650 FH</td><td>Before accumulating 750 FH since new</td></tr>
<tr><td>Equal to or more than 650 FH</td><td>Within 100 FH after the effective date of this AD</td></tr>
</table>
(2) From the effective date of this AD, installation on any propeller of a P/N 697065001 and P/N 697096001 AP, having a s/n as listed in Appendix 1 of this AD, is allowed, provided that AP has been recertified (including brush replacement) by Dowty Propellers.
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<tr><td>Ref. Publications:</td><td>
Dowty Propellers ASB C27J-61-A50 Initial Issue dated 08 July 2013.

Dowty Propellers ASB C130J-61-A112 Initial Issue dated 08 July 2013.

The use of later approved revisions of these documents is acceptable for compliance with the requirements of this AD.
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<tr><td>Remarks:</td><td>
1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.

2. This AD was posted on 19 July 2013 as PAD 13-102 for consultation until 19 August 2013. No comments were received during the consultation period.

3. Enquiries regarding this AD should be referred to the Safety Information Section, Executive Directorate, EASA. E-mail ADs@easa.europa.eu.

4. For any question concerning the technical content of the requirements in this AD, please contact:
Dowty Propellers, Anson Business Park, Cheltenham Road East, Gloucester GL2 9QN, United Kingdom
Tel +44 (0) 1452 716067 – Fax +44 (0) 1452 716001
E-mail Mike.Towkan@ge.com.
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Appendix 1

Auxiliary Pumps, Part Number (P/N) 697065001 and 697096001, all affected serial numbers:

Auxiliary Pumps, P/N 697096001:

DAP0095	DAP0121 to DAP0140	DAP0142 to DAP0177

Auxiliary Pumps, Part Number (P/N) 697065001, OE Units:

DAP1043	DAP1044	DAP1046 to DAP1064	DAP1066 to DAP1119
DAP1121	DAP1123 to DAP1148	DAP1150 to DAP1309	DAP1311
DAP1312	DAP1313	DAP1315 to DAP1324	DAP1326
DAP1327	DAP1331	DAP1333 to DAP1335	DAP1337 to DAP1346
DAP1348 to DAP1350	DAP1354	DAP1355	DAP1357
DAP1358	DAP1360	DAP1363 to DAP1366	DAP1369
DAP1370	DAP1372	DAP1374	DAP1376 to DAP1387
DAP1390	DAP1391	DAP1392	DAP1394 to DAP1412
DAP1414 to DAP1427	DAP1429	DAP1430	DAP1432 to DAP1445
DAP1448 to DAP1458	DAP1463	DAP1466	DAP1467
DAP1477	DAP1478	DAP1483	

Auxiliary Pumps, P/N 697065001, Repair Units:

DAP0006	DAP0016	DAP0022	DAP0024	DAP0026	DAP0030
DAP0032	DAP0036	DAP0040	DAP0041	DAP0048	DAP0056
DAP0061	DAP0063	DAP0088	DAP0090	DAP0095	DAP0104
DAP0109	DAP0126	DAP0127	DAP0128	DAP0135	DAP0139
DAP0140	DAP0145	DAP0152	DAP0157	DAP0158	DAP0181
DAP0182	DAP0184	DAP0189	DAP0219	DAP0228	DAP0231
DAP0235	DAP0242	DAP0255	DAP0247	DAP0257	DAP0260,
DAP0261	DAP0262	DAP0264	DAP0269	DAP0273	DAP0274
DAP0275	DAP0277	DAP0300	DAP0304	DAP0305	DAP0313
DAP0320	DAP0324	DAP0325	DAP0331	DAP0334	DAP0335
DAP0340	DAP0341	DAP0343	DAP0344	DAP0354	DAP0355
DAP0362	DAP0365	DAP0378	DAP0379	DAP0392	DAP0403
DAP0460	DAP0461	DAP0463	DAP0476	DAP0494	DAP0502
DAP0553	DAP0556	DAP0563	DAP0629	DAP0638	DAP0668
DAP0682	DAP0725	DAP0738	DAP0780	DAP0796	DAP0820
DAP0831	DAP0836	DAP0847	DAP0857	DAP0864	DAP0890
DAP0914	DAP0934	DAP1015	DAP1031	DAP1124	DAP1144
DAP1153	DAP1154	DAP1165	DAP1168	DAP1169	DAP1170
DAP1171	DAP1215	DAP1228	DAP1237	DAP1239	

Note: Part number sequences in the tables above are always inclusive of the first and last stated number.