| EASA | AIRWORTHINESS DIRECTIVE |
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| | **AD No.: 2014-0163**<br><br>**Date: 11 July 2014**<br><br>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):** |
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| WSK "PZL-ŚWIDNIK" S.A. | PZL SW-4 helicopters |

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| TCDS Number: | EASA R.100 |
| Foreign AD: | Not applicable |
| Supersedure: | None |

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| **ATA 64** | **Tail Rotor – Blade Attachment Bolts and Pins – Inspection / Replacement** |
| Manufacturer(s): | Wytwórnia Sprzętu Komunikacyjnego (WSK) "PZL-Świdnik" S.A. |
| Applicability: | PZL SW-4 helicopters, all serial numbers (S/N), if equipped with a Tail Rotor (TR) S/N 01.006 or consecutive, incorporating TR blade attachment bolts part number (P/N) 60.02.610.03.00 or P/N 60.02.610.03.01 and TR pins P/N 60.02.610.04.00. |
| Reason: | During an unscheduled replacement of TR blades on a PZL SW-4 helicopter, which had accumulated approximately 90 flight hours (FH) during a 2 year service period, corrosion pits were found on TR blade attachment bolts. Disassembly of the affected TR revealed traces of corrosion also on one TR pin.<br><br>Additional inspections of TR blade attachment bolts and TR pins installed on SW-4 helicopters (military version of PZL SW-4 helicopter) performed in the frame of investigation into the root cause of corrosion resulted in further bolt and pin corrosion findings and also revealed defects of anti-corrosion protective coating applied to those parts. Several causes of corrosion and anti-corrosion protection damages have been identified, including fretting, stress corrosion and adverse local environmental conditions.<br><br>TR bolt and pin surface damages due to corrosion affect the fatigue strength of those parts and can lead to their fatigue cracking.<br><br>This condition, if not detected and corrected, could lead to structural failure of a TR and consequent loss of the TR anti-torque function and further structural failures of the helicopter. |

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<tr><td></td><td>To address this unsafe condition, WSK "PZL-Świdnik" S.A. issued Mandatory Bulletin (MB) No. BO-60-14-69 providing instructions for inspection of TR blade attachment bolts and TR pins.<br><br>For the reasons described above, this AD requires repetitive inspections of the TR blade attachment bolts and TR pins for corrosion and for the condition of the anti-corrosion protective coating and, depending on findings, replacement of defective parts.</td></tr>
<tr><td>Effective Date:</td><td>25 July 2014</td></tr>
<tr><td>Required Action(s) and Compliance Time(s):</td><td>Required as indicated, unless accomplished previously:<br><br>(1) Within the compliance time specified in Table 1 of this AD, and, thereafter, at intervals not to exceed 300 FH or 12 months, whichever occurs first, inspect the TR blade attachment bolts and TR pins in accordance with the instructions and airworthiness criteria of paragraphs 3. and 4. in Chapter II of WSK "PZL-Świdnik" S.A. MB No. BO-60-14-69.<br><br>Table 1 – Initial inspection of TR blade attachment bolts and TR pins<br><br><table><tr><th>FH / months accumulated by bolt or pin, on the effective date of this AD, since first installation on a helicopter</th><th>Compliance time</th></tr><tr><td>Less than 250 FH and less than 6 months</td><td>Before exceeding 300 FH or before reaching 12 months since first installation on a helicopter, whichever occurs first</td></tr><tr><td>Equal to or more than 250 FH or equal to or more than 6 months</td><td>Within 50 flight hours or 6 months, whichever occurs first after the effective date of this AD</td></tr></table><br>(2) If, during any inspection as required by paragraph (1) of this AD, any non-compliance with the airworthiness criteria defined in paragraph 4. in Chapter II of WSK "PZL-Świdnik" S.A. MB No. BO-60-14-69 is detected, before next flight, replace each affected TR blade attachment bolt and/or TR pin with a serviceable part in accordance with the instructions of paragraph 5. in Chapter II of WSK "PZL-Świdnik" S.A. MB No. BO-60-14-69.<br><br>(3) From the effective date of this AD, installation of a TR blade attachment bolt P/N 60.02.610.03.00 or P/N 60.02.610.03.01 or a TR pin P/N 60.02.610.04.00 is allowed, provided it is new or it has passed the inspection in accordance with the instructions and airworthiness criteria of paragraphs 3. and 4. in Chapter II of WSK "PZL-Świdnik" S.A. MB No. BO-60-14-69.<br><br>(4) Replacement of a TR blade attachment bolt or a TR pin as required by paragraph (2) of this AD does not constitute terminating action for the repetitive inspection as required by paragraph (1) of this AD.</td></tr>
<tr><td>Ref. Publications:</td><td>WSK "PZL-Świdnik" S.A. MB No. BO-60-14-69 dated 08 July 2014.<br><br>The use of later approved revisions of this document is acceptable for compliance with the requirements of this AD.</td></tr>
<tr><td>Remarks:</td><td>1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.</td></tr>
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| | 2. Based on the required actions and the compliance time, EASA have decided to issue a Final AD with Request for Comments, postponing the public consultation process until after publication.<br>3. Enquiries regarding this AD should be referred to the Safety Information Section, Executive Directorate, EASA. E-mail: ADs@easa.europa.eu.<br>4. For any question concerning the technical content of the requirements in this AD, please contact:<br>Wytwórnia Sprzętu Komunikacyjnego "PZL-Świdnik" S.A.<br>Al. Lotników Polskich 1, 21-045 Świdnik, Poland<br>Telephone: +48 81 468 09 01, +48 81 751 20 71<br>Fax: +48 81 468 09 19, +48 81 751 21 73. |