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| <b>EASA</b>  | <b>EMERGENCY AIRWORTHINESS DIRECTIVE</b>   |   |
|   | <p><b>AD No.: 2014-0085-E</b></p> <p><b>Date: 11 April 2014</b></p> <p>Note: This Emergency 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.</p>   |   |
| <p>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].</p> |  |   |
| <p><b>Design Approval Holder's Name:</b><br/>WSK "PZL-ŚWIDNIK" S.A.</p>  |  | <p><b>Type/Model designation(s):</b><br/>PZL SW-4 helicopters</p> |
| TCDS Number:   | EASA R.100   |   |
| Foreign AD:  | Not applicable   |   |
| Supersedure:   | None   |   |
| <b>ATA 64</b>  | <b>Tail Rotor – Push-Pull Rod Spherical Bearings – Inspection / Replacement</b>  |   |
| Manufacturer(s):   | Wytwórnia Sprzętu Komunikacyjnego (WSK) "PZL-Świdnik" S.A.   |   |
| Applicability:   | PZL SW-4 helicopters, all serial numbers (s/n), if equipped with Tail Rotor (TR) Push-Pull Rod Assemblies Part Number (P/N) 60.02.620.00.00.   |   |
| Reason:  | <p>During post flight check of an SW-4 helicopter (military version of PZL SW-4 helicopter), a failure of one spherical bearing of the TR push-pull rod was detected. The affected bearing was found with its outer ring slipped out of the inner spherical race. There were no failure symptoms observed during flight.</p> <p>Further investigation of the affected TR push-pull rod bearing showed wiping and peeling of the Teflon-steel liner of the inner spherical race which resulted in extensive wear of the bearing. That wear of the affected bearing had not been discovered previously during scheduled DAILY INSPECTIONS and POST-FLIGHT CHECKS, as these only consisted of general visual inspections of the TR for overall condition.</p> <p>Failure of a spherical bearing causes changes in loading conditions in the TR push-pull rod and can lead to fatigue cracking.</p> <p>This condition, if not detected and corrected, could lead to structural failure of a TR push-pull rod and consequent loss of the TR anti-torque function, possibly resulting in loss of control of the helicopter.</p> <p>For the reasons described above, this AD requires repetitive inspections of the TR push-pull rod bearings for condition and no play and, depending on findings, accomplishment of corrective actions.</p> |   |

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| Effective Date:                            | 14 April 2014   |
| Required Action(s) and Compliance Time(s): | <p>Required as indicated, unless accomplished previously:</p> <ol style="list-style-type: none"> <li>(1) Before next flight after the effective date of this AD and, thereafter, during every POST-FLIGHT CHECK, inspect the spherical bearings installed on the TR push-pull rod and attached to the TR blade pitch arm for condition of the inner race and for clearance in accordance with the instructions of point 1. of WSK "PZL-Świdnik" S.A. Service Letter (SL) No. LS-022/2013 Revision 1.</li> <li>(2) During the next scheduled 100-HOUR INSPECTION or within 100 FH, whichever occurs first after the effective date of this AD, and, thereafter, at intervals not to exceed 100 FH, measure the axial clearance in both spherical bearings of the TR push-pull rod in accordance with the instructions of point 2. of WSK "PZL-Świdnik" S.A. SL No. LS-022/2013 Revision 1.</li> <li>(3) If, during any inspection as required by paragraph (1) of this AD, any clearance is detected, before next flight, measure the axial clearance in the spherical bearings of the TR push-pull rod in accordance with the instructions of point 2. of WSK "PZL-Świdnik" S.A. SL No. LS-022/2013 Revision 1.</li> <li>(4) If, during any inspection or measurement as required by paragraph (1) or (2) or (3) of this AD, any defect is found on any bearing inner race as identified in point 1.1. of WSK "PZL-Świdnik" S.A. SL No. LS-022/2013 Revision 1, before next flight, replace the TR push-pull rod incorporating the faulty bearing with a serviceable assembly.</li> <li>(5) If the result of any bearing clearance measurement as required by paragraph (2) or (3) of this AD exceeds any axial clearance criterion as defined in point 3.2. of WSK "PZL-Świdnik" S.A. SL No. LS-022/2013 Revision 1, before next flight, replace the TR push-pull rod incorporating the faulty bearing with a serviceable assembly.</li> <li>(6) Before exceeding 780 FH after first installation of a TR push-pull rod assembly P/N 60.02.620.00.00 on a helicopter, replace that assembly with a serviceable assembly.</li> <li>(7) From the effective date of this AD, a TR push-pull rod assembly P/N 60.02.620.00.00 may be installed on a helicopter, provided the assembly has accumulated less than 780 FH since first flight on a helicopter, has passed an inspection in accordance with the instructions of point 1. of WSK "PZL-Świdnik" S.A. SL No. LS-022/2013 Revision 1 and, following installation, is inspected and replaced as required by this AD.</li> <li>(8) Accomplishment of corrective actions on a helicopter as required by paragraphs (4), (5) and (6) of this AD does not constitute terminating action for the repetitive inspections and measurements as required by paragraphs (1) and (2) of this AD for that helicopter.</li> </ol> |
| Ref. Publications:                         | <p>WSK "PZL-Świdnik" S.A. SL No. LS-022/2013 Revision 1 dated 21 March 2014.</p> <p>The use of later approved revisions of this document is acceptable for compliance with the requirements of this AD.</p>   |
| Remarks:                                   | <ol style="list-style-type: none"> <li>1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.</li> <li>2. The results of the safety assessment have indicated the need for immediate publication and notification, without the full public consultation process.</li> </ol>   |

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|  | <p>3. Enquiries regarding this AD should be referred to the Safety Information Section, Executive Directorate, EASA. E-mail: <a href="mailto:ADs@easa.europa.eu">ADs@easa.europa.eu</a>.</p> <p>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/>Phone: (+48) 81 468 09 01, (+48) 81 751 20 71<br/>Fax: (+48) 81 468 09 19, (+48) 81 751 21 73</p> |
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