



## Airworthiness Directive

**AD No.:** 2019-0052

**Issued:** 14 March 2019

Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EU) 2018/1139 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 129 of that Regulation.

This AD is issued in accordance with Regulation (EU) 748/2012, Part 21.A.3B. In accordance with Regulation (EU) 1321/2014 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 [Regulation (EU) 1321/2014 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [Regulation (EU) 2018/1139, Article 71 exemption].

### Design Approval Holder's Name:

WSK "PZL – ŚWIDNIK" S.A.

### Type/Model designation(s):

PZL SW-4 helicopters

**Effective Date:** 21 March 2019

**TCDS Number(s):** EASA.R.100

**Foreign AD:** Not applicable

**Supersedure:** None

## ATA 78 – Exhaust – Exhaust Ducts and Clamps – Inspection / Modification

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### Manufacturer(s):

WSK "PZL – Świdnik" S.A.

### Applicability:

PZL SW-4 helicopters, all serial numbers (s/n).

### Definitions:

For the purpose of this AD, the following definitions apply:

**Affected duct:** Exhaust ducts, Part Number (P/N) 60.04.102.00.01 (any revision) and P/N 60.04.102.00.02 revision A (right-hand (RH) ducts); and P/N 60.04.103.00.00 revision K or earlier (left-hand (LH) ducts).

**Clamp:** Exhaust duct clamps, P/N 60.04.105.00.00.

**Improved duct:** Exhaust Ducts, P/N 60.04.102.00.02 revision B or later (RH ducts); and P/N 60.04.103.00.00 revision L or later (LH ducts). Each part is identified by a permanent mark stating the P/N, revision level and year of manufacture.

**The MB:** WSK "PZL-ŚWIDNIK" S.A. PZL SW-4 Mandatory Bulletin (MB) No. BO-60-18-94.



**Groups:** Group 1 helicopters are those with s/n 60.02.02, 60.03.23, 60.03.24, 60.04.02, 60.04.03, 60.04.05 and 60.04.06.

Group 2 helicopters are those with s/n 60.01.04, 60.02.02, 60.03.22, 60.03.23, 60.03.24, 60.04.02, 60.04.03, 60.04.04, 60.04.05, 60.04.06 and 60.04.07.

Group 3 helicopters are those with s/n 60.04.08, 60.04.09 and 60.04.10, and later s/n.

#### Reason:

Occurrences were reported of finding cracked clamps and damaged affected ducts. Subsequent investigation determined that the reason of the clamp cracking could be attributed to imperfect maintenance installation instructions, application of which might introduce stress induced cracks. Investigation of cracked exhaust ducts determined that a manufacturing deficiency (missing specific heat treatment) may have led to crack initiation.

This condition, if not detected and corrected, could lead to detachment of a clamp or affected duct, possibly resulting in impact or thermal damage on rotors and consequent reduced control of the helicopter.

Prompted by these events, WSK "PZL – Świdnik" S.A. improved the applicable clamp installation maintenance instructions and identified helicopters on which clamps could be installed not in accordance with those improved maintenance instructions. Additionally, WSK "PZL – Świdnik" S.A. developed improved manufacturing procedures (specific heat treatment) of exhaust ducts and some ducts manufactured in accordance with those improved procedures have been installed (Group 3 helicopters). WSK "PZL – Świdnik" S.A. also issued the MB to provide inspection and modification instructions for Group 1 and Group 2 helicopters.

For the reasons described above, this AD requires a one-time inspection of clamps on certain helicopters, repetitive inspections of affected ducts and, depending on findings, repair or replacement. This AD also requires a modification by installing improved exhaust ducts, which constitutes terminating action for repetitive inspections. This AD also introduces part installation restrictions to prevent installation of affected ducts.

#### Required Action(s) and Compliance Time(s):

Required as indicated, unless accomplished previously:

#### Inspection(s):

- (1) Group 1 helicopters: Within 25 flight hours (FH) after the effective date of this AD, inspect each clamp in accordance with the instructions of Chapter II section 1 of the MB.
- (2) Group 2 helicopters: Within 25 FH after the effective date of this AD and, thereafter, at intervals not to exceed 25 FH, inspect each affected duct in accordance with the instructions of Chapter II section 2 of the MB.

#### Corrective Action(s):

- (3) If, during the inspection as required by paragraph (1) of this AD, any damaged clamp is detected, before next flight, replace the damaged clamp with a new part in accordance with the instructions of Chapter II section 1 of the MB.



- (4) If, during any inspection as required by paragraph (2) of this AD, any cracked duct is detected, before next flight, accomplish a repair of the affected duct in accordance with the instructions of Chapter II section 2 of the MB, or replace the affected duct with an improved duct in accordance with the instructions of Chapter II section 3 of the MB.

**Modification:**

- (5) Group 2 helicopters: Unless accomplished as required by paragraph (4) of this AD, for both RH and LH ducts, within 12 months after the effective date of this AD, modify the helicopter by replacing each affected duct with an improved duct in accordance with the instructions of Chapter II section 3 of the MB.

**Terminating Action:**

- (6) Modification of a helicopter as required by paragraph (5) of this AD, or replacement of both RH and LH ducts as required by paragraph (4) of this AD, as applicable, constitutes terminating action for repetitive inspections as required by paragraph (2) of this AD for that helicopter.

**Parts Installation:**

- (7) Do not install on any helicopter an affected duct, as required by paragraph (7.1) and (7.2) of this AD, as applicable.

(7.1) Group 2 helicopters: After modification of the helicopter as required by paragraph (5) of this AD, or after replacement of both RH and LH ducts as required by paragraph (4) of this AD, as applicable.

(7.2) Group 3 helicopters: From the effective date of this AD.

**Ref. Publications:**

WSK "PZL-ŚWIDNIK" S.A. PZL SW-4 MB No. BO-60-18-94 original issue dated 06 March 2019.

The use of later approved revisions of the above-mentioned document is acceptable for compliance with the requirements of this AD.

**Remarks:**

1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.
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.
3. Enquiries regarding this AD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: [ADs@easa.europa.eu](mailto:ADs@easa.europa.eu).
4. Information about any failures, malfunctions, defects or other occurrences, which may be similar to the unsafe condition addressed by this AD, and which may occur, or have occurred on a product, part or appliance not affected by this AD, can be reported to the [EU aviation safety reporting system](#).



5. For any question concerning the technical content of the requirements in this AD, please contact: WSK "PZL- Świdnik" S.A., Al. Lotników Polskich 1, 21-045 Świdnik, Poland, Telephone: (+48) 81 722 6140; E-mail: [PL-CustomerSupport.AW@leonardocompany.com](mailto:PL-CustomerSupport.AW@leonardocompany.com).

