

AEROPRAKT

SAFETY ALERT

No. SA A22LS-16

INSPECTION OF RUDDER CONTROL SYSTEM CABLES OF A-22LS AND A-22L2 AIRCRAFT

Repeating symbols:

Please, pay attention to the following symbols throughout this document marking important information.

- ▲ **WARNING:** Identifies an instruction, which if not followed may cause serious injury or even death.
- **CAUTION:** Denotes an instruction, which if not followed, may cause severe damage.
- ◆ **NOTE:** Information useful for better handling.

Release date: 2.04.2018

Effective date: 2.04.2018

Completion date:

Superseded notice: none

Model: A-22LS, A-22L2

Serial number(s) affected: All aircraft with flight time over 500 hours or service life over 5 years.

1) Planning information**1.1) Aircraft affected**

Aeroprakt-22LS and Aeroprakt-22L2 airplanes.

1.2) Reason

Fatigue failure of the rudder control system cables was detected.

1.3) Subject

Rudder control system cables.

1.4) Compliance

Compliance with this Safety Alert is obligatory due to flight safety reasons!

1.5) Approval

The technical content of this Safety Alert has been approved by Aeroprakt.

1.6) Manpower

Estimated man-hours: 2-3 hours.

1.7) Mass data

Mass change – none.

1.8) Revision of other documents

None.

1.9) Spare parts

Sets of the rudder cable assemblies are supplied by local dealers.

2) Spare parts information**2.1) Spare parts cost**

Cost of a complete set of cable assemblies (left and right) – 280 Euro less cost of delivery.

3) Accomplishment / Instructions

▲ **WARNING:** Not carrying out the following work may cause failure of rudder control cables.

- 3.1) Remove the instrument compartment base to ensure access to the place of rudder cables' connection to the pedals.
- 3.2) Remove safety wire from the turnbuckles and disconnect the cables from the levers of the pedal shafts.
- 3.3) Remove the split pins from the pins attaching the cables to the rudder control arms. Remove the pins holding the cable shackles. Tie the cable shackles to a cord approximately 1 meter long.

◆ **NOTE:** The cord tied to the cable shackles will help to pull the cables back from the tail boom.

- 3.4) Estimate the condition of the cables in the areas of their contact with the forward and rear fairleads and pulleys. Using a 30x magnifying glass inspect the outer wires of the cables. Bending the cables in the area of its contact with a fairlead (pulley) and make sure that it does not produce crisping sounds. If the cable wires are damaged or produce crisping sounds when they are subjected to bending the cable must be replaced.
 - 3.5) To inspect the areas of contact of the cables with the forward fairlead installed on the seat beam pull the cables forward for 200-300 mm and carry out inspection according to instruction 3.4).
 - 3.6) To inspect areas of contact of the cables with the forward pulleys located on the landing gear beam remove the seats and pull out the cables 200-300 mm up in the space between the landing gear beam and baggage container and carry out inspection according to instruction 3.4).
 - 3.7) To inspect areas of contact of the cables with the rear pulleys pull the cables forward to the maximum and carry out inspection according to instruction 3.4).
 - 3.8) To inspect the areas of contact of the cables with the rear fairleads: drill out the rivets attaching the forward fairleads, push the forward ends of the cables through the openings in the seat beam towards the landing gear beam, pull the rear ends of the cables back from the tail boom to the maximum and carry out inspection according to instruction 3.4).
 - 3.9) If the cables are not damaged install them back in reversed order. In case if cable replacement or further technical support is required contact your local dealer.
- ◆ **NOTE:** Before re-installation of the cables check the pulleys for free rotation and the fairleads for wear.
- 3.10) Adjustment of the rudder control system must be performed with pedals fixed in their neutral position. The rudder must be deflected to the right-hand side to an angle of $2.2^{\circ} \pm 0.3^{\circ}$ (the trailing edge is at 15 ± 2 mm from the aircraft symmetry plane). The cable tension – 46 lb (21 kg).