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MANDATORY BULLETIN

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MODELS AFFECTED:	Viper SD-4 – all versions
APPLICABILITY:	All Viper SD-4 airplanes manufactured in line with the drawing documentation issued by TOMARK, s.r.o.
SUBJECT:	Connection of the central fuselage rear cross-beam with a central fuselage skin vertical stiffener of Viper SD-4
COMPLIANCE TIME:	As soon as possible/Before the next flight in the case of the airplanes that had damaged nose landing gear after hard landing, or had incidents with resulting damage to the airframe (see more detailed description in the REASON). In the case of other airplanes, during their next planned periodical maintenance (100 hrs / 1 year)
COMPLIANCE:	N/A

DESCRIPTION:	Airplanes Viper SD-4 – connection of the central fuselage rear cross-beam with a central fuselage skin vertical stiffener. Riveted joints at the bottom of the central fuselage, inside, at the floor, on both sides of the fuselage in the area of the short wing hinge.
REASON:	In the case of the airplanes that had a damaged nose landing gear, nose landing gear suspension system or the firewall after a hard landing on the nose landing gear (so-called bounced landing/PIO) or had incidents resulting in damage to the airframe, failure of the riveted joint between the central fuselage rear cross-beam and a central fuselage skin vertical stiffener was found. On the basis of the finding, it is recommended: <ol style="list-style-type: none">1) In the case of the aircraft that meet the conditions described above, to interrupt, without unnecessary delay, operation and carry out a repair of the critical node in the way specified by TOMARK s.r.o.2) In the case of the aircraft after hard landing that do not meet the conditions described above in this part, carry out an inspection of the critical node of the structure in the way described in this service bulletin.3) In the case of other aircraft, carry out an inspection of the critical node of the structure specified in this service bulletin during the next prescribed periodical maintenance (100 h / 1 year).

MANPOWER:	One person with required qualification for the airframe type (approved mechanic)
LABOUR TIME:	Approx: 1 hour
MATERIALS:	N/A
TOOLING:	Screwdriver Optical instrument (digital camera, video camera, mobile phone with a camera, endoscope/borescope) (Mirror + Light)
REFERENCES:	Airplane Technical Description and Operating and Maintenance Instructions
WEIGHT AND BALANCE:	No influence.
ELECTRICAL LOAD DATA:	No influence.

**TECHNICAL SUPPORT
INFORMATION:**

If necessary, please contact:
TOMARK, s.r.o.
Strojnícka 5,
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Tel: +421 51 7764 480,
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<http://vipersd4.sk/kontakt/>

**INSTRUCTIONS FOR MAKING AN INSPECTION OF THE CRITICAL NODE OF THE STRUCTURE
FOR THE AIRPLANES SPECIFIED IN THE “REASON”, PARAGRAPHS 2) AND 3):**

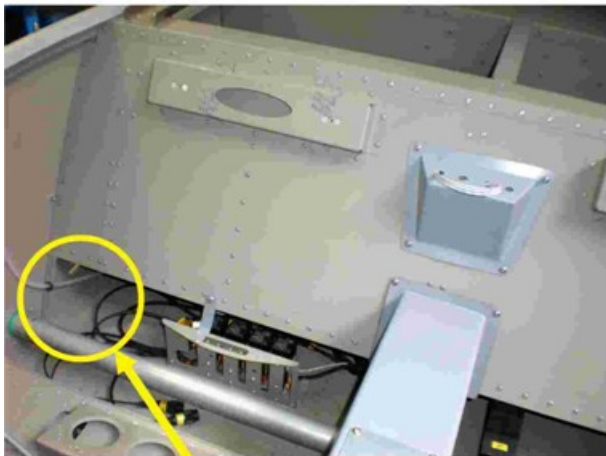
Step 1 – Dismounting of the airplane crew seats

- 1.1. Remove the removable part of the left seat upholstery. Unscrew 4x M4 screws attaching the left seat to the airplane’s fuselage. Be careful about different screw lengths in different attachment points. Remove the upholstery, the seat, and the fastening material from the cockpit and keep them safe for future use.
- 1.2. Remove the removable part of the right seat upholstery. Unscrew 4x M4 screws attaching the left seat to the airplane’s fuselage. Be careful about different screw lengths in different attachment points. Remove the upholstery, the seat and the fastening material from the cockpit and keep them safe for future use.

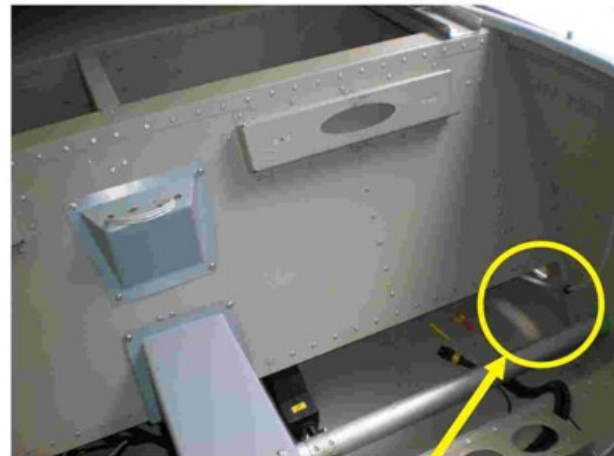
Step 2 – Checking of the condition of a riveted joint

- 2.1. By means of a suitable optical instrument, placed on the fuselage floor in the area under the edge of the luggage area front cover sheet, orientated towards the corner in the direction of the short wing hinge, check the riveted joint (4 rivets in a vertical arrangement) between the central fuselage rear cross-beam (SD4-A-1-236-N-3) and a central fuselage skin vertical stiffener (SD4-A-1-244-N-3) on both sides of the fuselage – under the left and right luggage areas.

Right side of the fuselage



Left side of the fuselage



Area for the placement of an optical instrument

Fig. 1 – Places for the use of optical instruments

- 2.2. By touching with fingers on the front side (on the side visible by means of an optical instrument) and also through the nearest lightening hole on the back side of the central fuselage rear cross-beam, check the presence of all 4 rivets and the possible loosening of the rivets of the riveted joint on both sides of the fuselage – under the left and right luggage areas.

- 2.3. If it is possible to use an endoscope/borescope or other suitable optical instrument during the inspection, check the presence of all 4 rivets on the back side of the central fuselage cross-beam through the nearest lightening hole in the central fuselage cross-beam.

Step 3 – Evaluation of the found condition

- 3.1. Unsatisfactory condition – loosened any of the 4 rivets in the inspected place, missing any part of any rivet, missing any whole rivet.
- 3.2. Satisfactory condition – present all complete 4 rivets and no loosening found on any of the checked rivets. (see fig. 2)

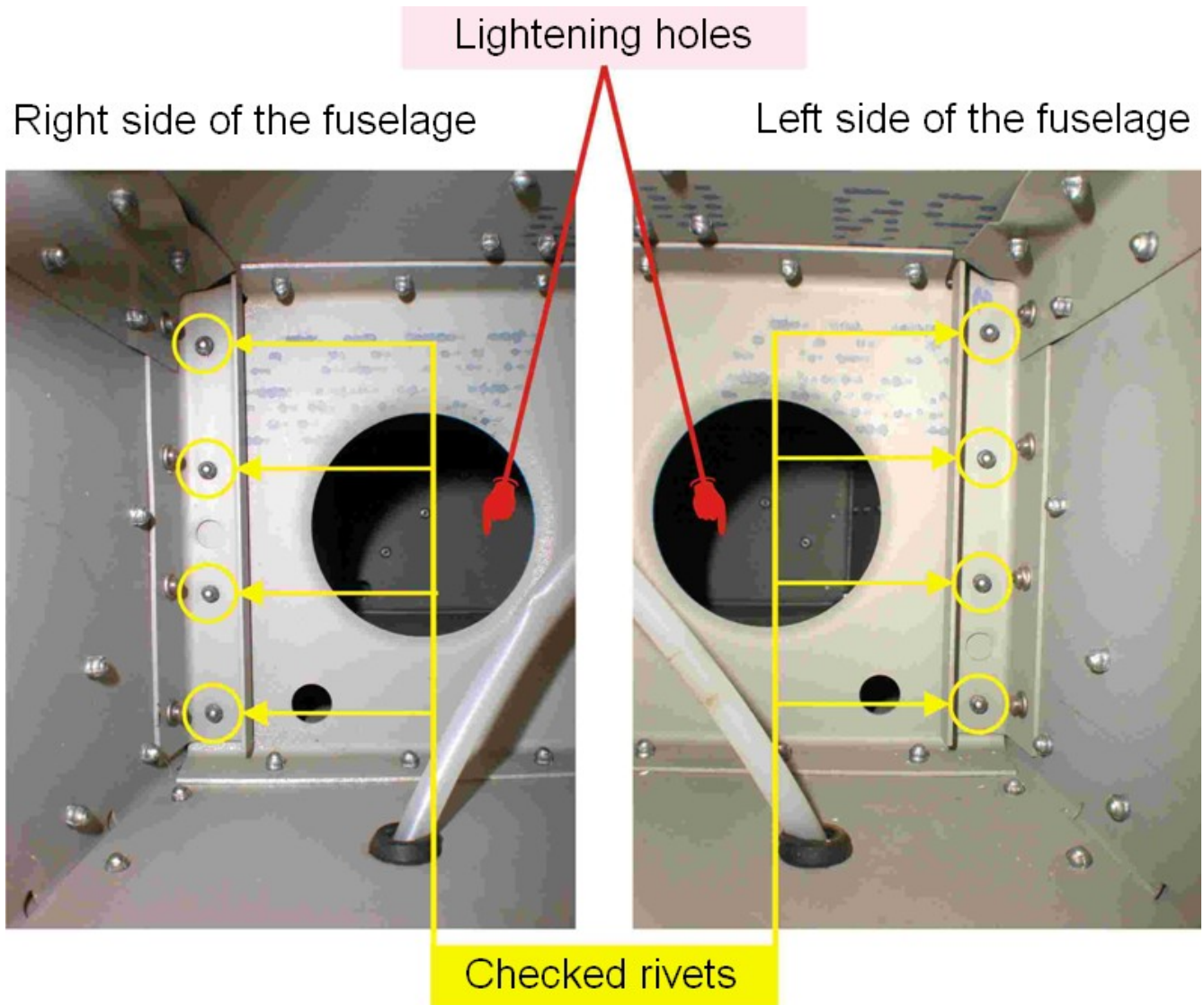


Fig. 2 – Checked rivets – a view from the side visible by means of an optical instrument

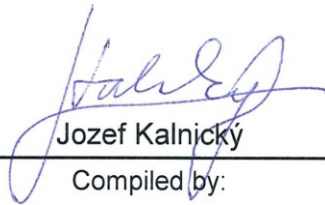
Step 4 – Corrective actions

- 4.1. If an unsatisfactory condition is found according to point 3.1, it is recommended to interrupt the operation of the airplane and, without unnecessary delay, contact TOMARK, s.r.o. TOMARK, s.r.o. will propose a procedure to eliminate the found unsatisfactory condition for each specific airplane.
- 4.2. If a satisfactory condition is found according to Step 3, continue with Step 5.

CAUTION! *The provision of point 4.2 only applies to the airplanes that do not meet the conditions specified in “REASON, paragraph 1)” and point 4.1. For the airplanes that meet the conditions specified in part “REASON, paragraph 1)” and point 4.1, it is strongly recommended to carry out a repair of the critical node according to the instructions from TOMARK, s.r.o.*

Step 5 – Re-installation of the airplane crew seats

- 5.1. Place the left seat in its position and attach it with 4x original M4 screws, unscrewed during the dismantling. Use the right lengths of screws for the respective attachment points, attaching the left seat to the airplane's fuselage. Attach the removable part of the seat upholstery.
- 5.2. Place the right seat in its position and attach it with 4x original M4 screws, unscrewed during the dismantling. Use the right lengths of screws for the respective attachment points, attaching the left seat to the airplane's fuselage. Attach the removable part of the seat upholstery.
- 5.3. Make a record of the works done on the airplane in the Airplane Operation Logbook.
- 5.4. It is recommended to check the critical part of the structure during periodic maintenance of the airplane (100 h / 1 year), in line with this bulletin.



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