

Issues

**MANDATORY BULLETIN No. EV 97-042a SR R1
SAFETY RELATED**

- 1. CONCERNING:** All EV-97 EuroStar airplanes.
- 2. REASON:** Unification of the strength class of the fastening bolts in the joint of the engine and the engine mount hinges and the resulting minimization of the possibility that these bolts will be accidentally interchanged.
- 3. REQUIRED ACTIONS:**
 1. Replace the fastening bolts in accordance with the bulletin text.
 2. Record the replacement in the Aircraft Logbook.
- 4. LATEST DAY OF THE ACTION:** Within 30 calendar days of the issue of this bulletin or during the next scheduled service inspection, whichever occurs first.
- 5. CARRIED OUT BY:** Organizations authorized for maintenance / repairs of this type of airplane.
- 6. COSTS COVERED BY:** Airplane owner/operator.
- 7. NECESSARY MATERIAL:** In accordance with the bulletin text.
- 8. WORK PROCEDURE:** In accordance with the bulletin text.
- 9. APPENDICES:** None.

Valid from: August 7th, 2023

**1. Work procedure****1.1 Necessary tools**

Name	Designation	Quantity
Workshop crane	Load capacity min. 150 kg	1 pc
Suspension straps	Load capacity min. 150 kg	3 pcs.
Hand electric drill		1 pc
Drill bit	ø 2,1 mm	1 pc
Torque wrench	20-100 Nm	1 pc
Pincers		1 pc
Adjustable pliers		1 pc
Allen wrench	No. 5	1 pc
Flat screwdriver		1 pc
Marking pin		1 pc

1.2 Necessary material (in accordance with EV97-042A)

Name	Designation	Nomencl.	Quantity
Bolt M10-35		S6 66-01 21	3 pcs.
Plug		SG6 04-03 21	4 pcs.
Cable tie	3,6x142 mm	060333	20 pcs.
Cable tie	4,8x368 mm	060371	20 pcs.
Cotter pin 2x32		039651	4 pcs.
Washer 10,2	DIN 7980	037209	3 pcs.

The material will be supplied by the airplane manufacturer.

1.3 Work procedure**1.3.1 Replacement of bolts in the joint of the engine and the engine mount hinges**

- 1.3.1.1 Switch the electrical network off.
- 1.3.1.2 Turn the fuel cock control to the **OFF** position.
- 1.3.1.3 Remove the upper engine cowling.
- 1.3.1.4 Disconnect the battery.
- 1.3.1.5 Unscrew and remove the bolts (with the washers) which attach the cooler to the lower engine cowling. Remove the hose clamp and disconnect the hose of the cold air inlet of the heating exchanger. Remove the lower part of the engine cowling.
- 1.3.1.6 Cut the cable ties on the engine wiring to gain access to the bolts of the engine on the engine mount hinges.

- 1.3.1.7 Remove any hoses or devices that prevent access to the bolts of the engine on the engine mount hinges. In case of removal of one of the hoses, make sure to drain its contents.
- 1.3.1.8 Secure the ends of the removed hoses with suitable plugs against the ingress of dirt.
- 1.3.1.9 Hang the engine (3, Fig. 1) on the workshop crane (1) using the suspension strap (2). The engine (3) is now secured against falling.
- 1.3.1.10 Remove the cotter pins and plugs (5, 7, Fig. 3) from the bolts (1, 2, 3, 4, Fig. 2) in the joint of the engine and the engine mount hinges.

CAUTION

THREADS OF BOLTS TIGHTENED WITH A TORQUE
WRENCH MUST NOT BE GREASED!

- 1.3.1.11 Remove the bolt (1) from the joint of the engine and the engine mount hinges. Immediately replace the removed bolt with a **new** bolt and a **new** washer (6, Fig.3) and tighten it lightly.
- 1.3.1.12 Remove the bolt (2) from the joint of the engine and the engine mount hinges. Immediately replace the removed bolt with a **new** bolt and a **new** washer (6, Fig.3) one and tighten it lightly.
- 1.3.1.13 Remove the bolt (3) from the joint of the engine and the engine mount hinges. Immediately replace the removed bolt with a **new** bolt and a **new** washer (6, Fig.3) and tighten it lightly.
- 1.3.1.14 Tighten the bolt (4, Fig. 2) in the joint of the engine and the engine mount hinges using a torque wrench with a torque of 40 Nm. This bolt is the only one that is not replaced, but the tightening torque value is changed from 35 Nm to 40 Nm.
- 1.3.1.15 Tighten the bolts (1,2,3) in the joint of the engine and the engine mount hinges using a torque wrench with a torque of 40Nm.
- 1.3.1.16 Put the plugs (5, Fig.3) on the bolts (4), (1,2,3,4, Fig.2).
- 1.3.1.17 Mark the plugs (5, Fig. 3) with a marking pin in accordance with the holes in the engine mount hinges (2) on both sides.
- 1.3.1.18 Remove the plugs (5) from the bolts (4) and drill through them with a $\varnothing 2,1$ mm drill bit in accordance with the marks made by the marking pin.
- 1.3.1.19 Put the plugs (5) back on the bolts (4) so that they align with the holes in the engine mount hinges (2).
- 1.3.1.20 Use the cotter pins (7) to secure the bolts (4) with the plugs (5) in the joint of the engine and the engine mount hinges (2).
- 1.3.1.21 Release the engine from the mounting crane (Fig. 1).
- 1.3.1.22 Remove all plugs from hoses or devices.
- 1.3.1.23 Attach all hoses which were previously removed to gain access to the bolts.
- 1.3.1.24 Attach new cable ties to the engine wiring if they were previously cut to gain access to the bolts.

- 1.3.1.25 Attach the cooler to the lower engine cowling and connect the cold air inlet hose to the heat exchanger. Install the lower engine cowling.
- 1.3.1.26 Refill the operating fluids (coolant, oil) if they have been drained while accessing the bolts of the engine mount hinges (4, Fig. 3) according to the ROTAX Maintenance Manual MML-912 | PART NO.: 899196 or later.
- 1.3.1.27 Connect the battery.
- 1.3.1.28 Install the upper engine cowling.
- 1.3.1.29 Switch the electrical network on.
- 1.3.1.30 Carry out the engine test in accordance with the Pilot's Operating Handbook (Chapter 4).

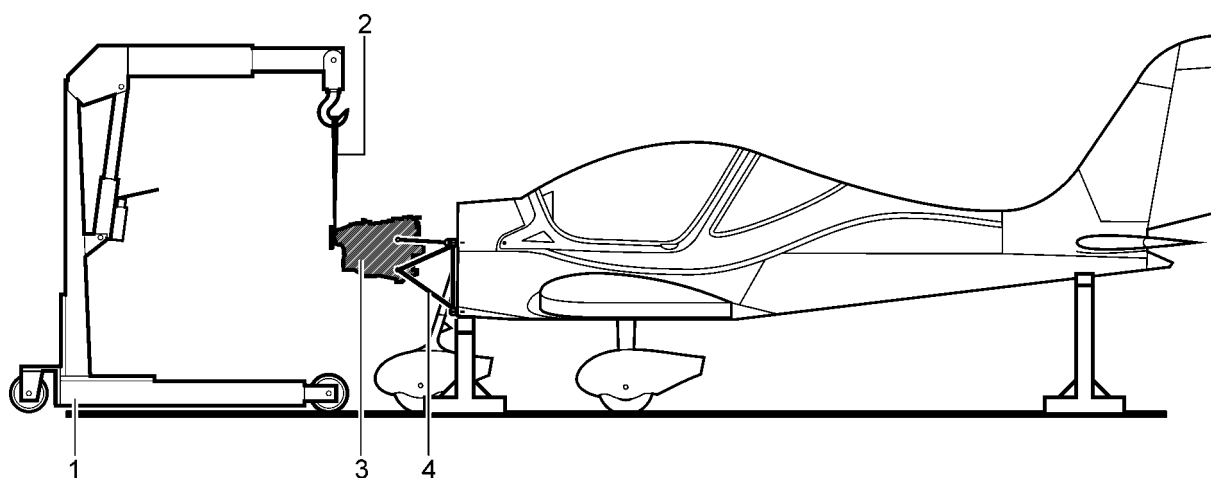


Fig. 1 – Securing the engine against falling

Legend to Fig. 1

- | | | | |
|---|------------------|---|--------------|
| 1 | Workshop crane | 3 | Engine |
| 2 | Suspension strap | 4 | Engine mount |

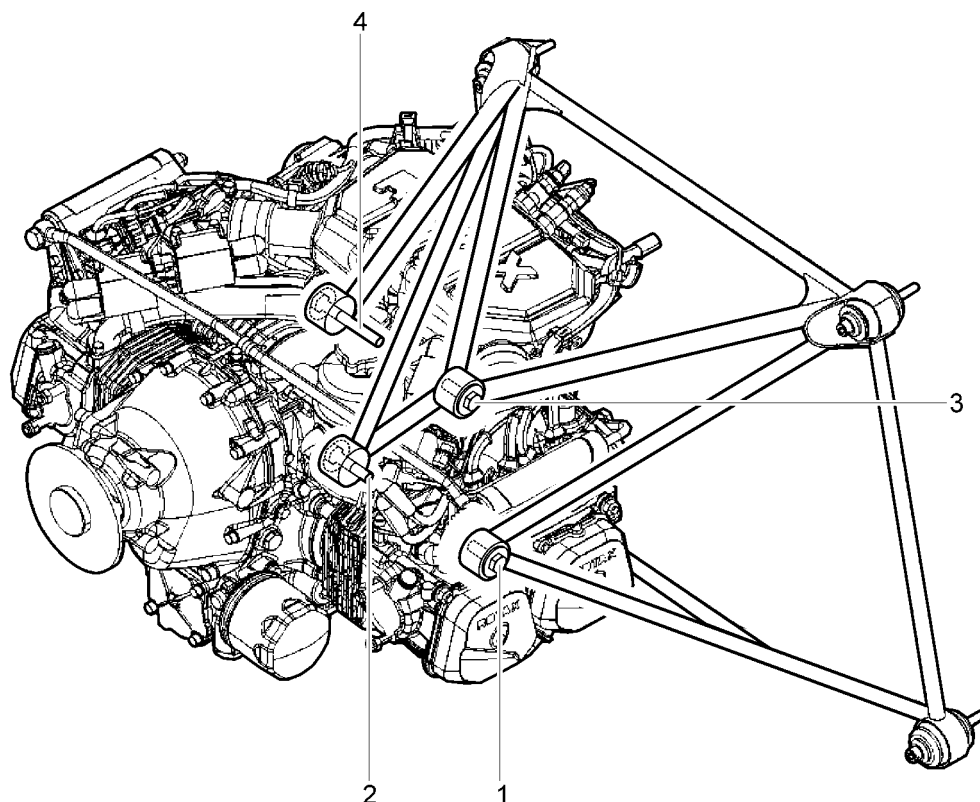
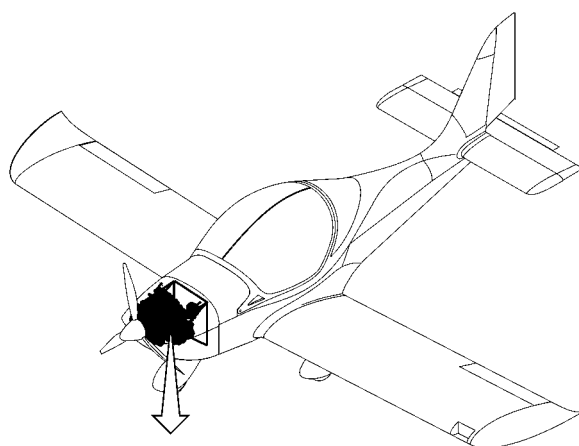
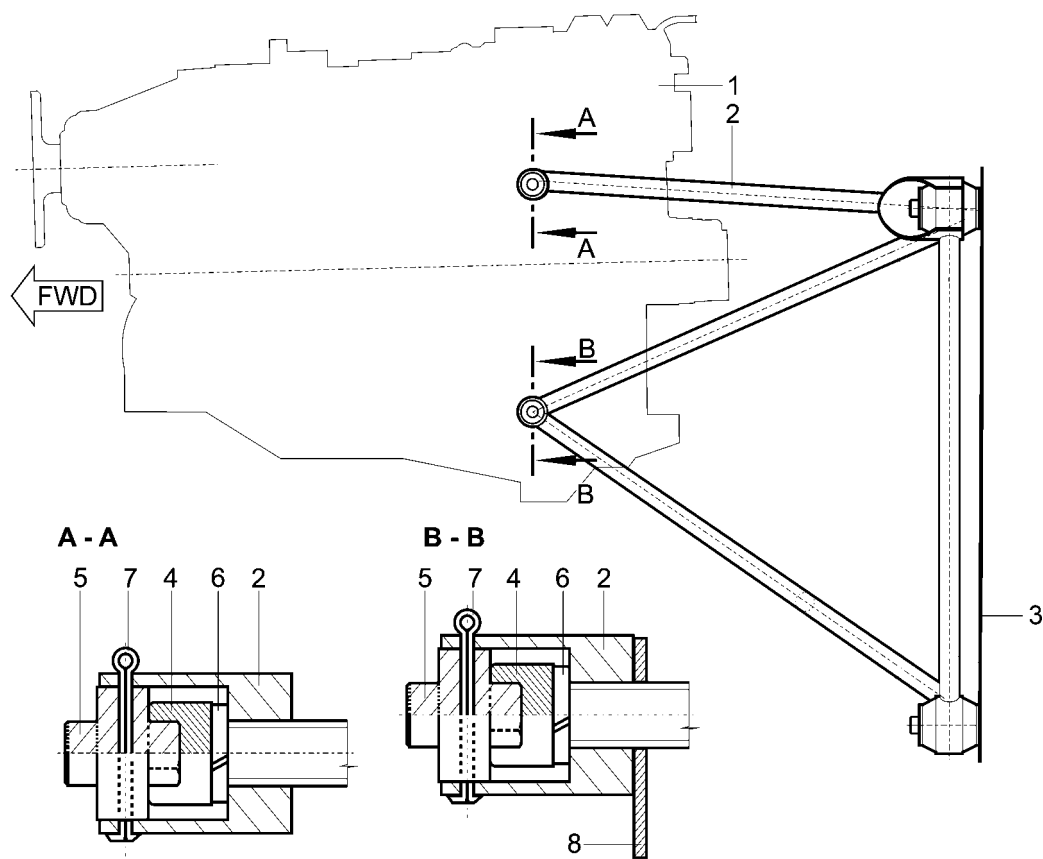


Fig. 2 – Engine mount – position of fastening bolts

Legend to Fig. 2

- 1 Bolt M10-35
- 2 Bolt M10-35

- 3 Bolt M10-35
- 4 Bolt M10-110

*Fig. 3 – Engine suspension*

Legend to Fig. 3

- | | | | |
|---|----------------------|---|----------------------------|
| 1 | Engine | 5 | Plug (4 pieces) |
| 2 | Engine mount | 6 | Lock washer (4 pieces) |
| 3 | Firewall | 7 | Cotter pin (4 pieces) |
| 4 | Bolt M10 (3+1 piece) | 8 | Muffler attachment bracket |

2 Influence on airplane documentation

2.1 Accompanying technical documentation

Not affected.

2.2 Operation technical documents

The authorized person will carry out the record in the Aircraft Logbook after the bulletin implementation: „**Bolt replacement was performed in accordance with the Mandatory bulletin No. EV97-42a SR R1**“, and he will add the date and signature.

3 Influence on weight and balancing

Not affected.