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SERVICE BULLETIN SB/EUR.020 Issue 1

Eurostar Aircraft, Engine Mount Bolts **27th Oct. 2023**

Classification: - Essential

Nature of Defect

There have been isolated occurrences of failure of the M10 bolts securing the Rotax engine to its frame. The failure cause is thought to be fatigue caused by the bolts losing their tensions permitting movement between engine and engine mount.

Airworthiness Implications

Loose or missing engine mount bolts will result in inadequate support for the engine, consequent vibration and possible catastrophic failure endangering the aircraft.

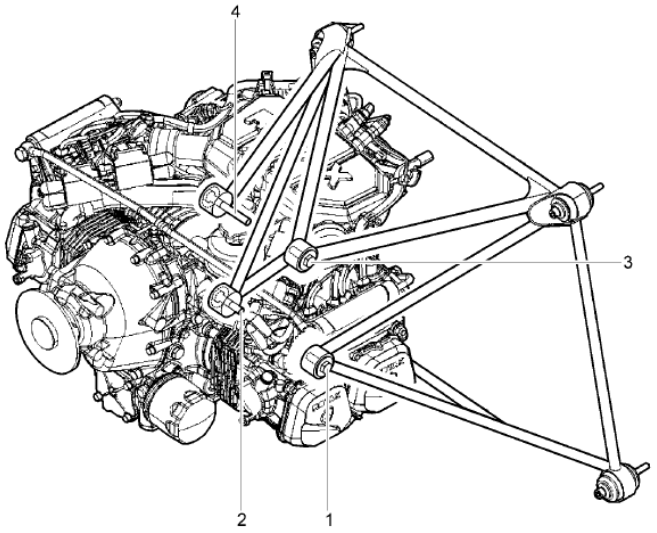
Aircraft Affected

All UK EV-97 Eurostar aircraft are to be checked and rectified as necessary.

Inspection Required

Within the next 5 hours carry out the following:

1. Gain access to the heads of each of the 4 off M10 cap head bolts, 1 – 4, securing the engine to the engine mount, as shown on the right:



2. Remove the black plastic plugs from the bolts' heads and discard them.

3. Check the torque on bolts 1, 2 and 3 at 35Nm. If the bolt moves at this torque, remove the bolt completely, discard it and replace as detailed below.

4. Tighten bolt 4 to 40Nm.

Note: *it is often possible to see if there has been inadequate tension on the bolt by the presence of dark grey dust between engine block and engine mount at the mating surfaces.*

Rectification Action

1. Support the engine so that with the bolts removed or loosened it will remain in position without damage to engine connections. Only remove 1 bolt at a time.

2. Alternatively it may be possible to replace the bolts one at a time with minimal engine support. However good alignment of the bolts before installation is essential as a cross threaded bolt will easily damage the thread in the engine block casting.

3. With the bolts out, as far as practically possible, remove the powder coating on the engine mount, locally, where it contacts the engine block. This is straightforward to do on the lower mount points, where the exhaust mounting brackets are withdrawn and leave space, but difficult on the upper two. Use a thin scraper or abrasive paper. Apply a little grease to the bared metal for protection

4. Replace each loose bolt with an M10 x 35, 10.9 cap head, bright zinc plated. A replacement kit is available from Airmasters. Apply two drops of Loctite 221 to the thread before installation and torque to 40Nm.

5. Reinstate all disturbed wiring hoses and brackets.

6. Enter a record of the work in the aircraft's log book or reference work sheets detailing the work. Include the reference to this Service Bulletin SB/EUR.020. issue 1 (Please notify Airmasters if a broken bolt is found).

7. Have the work inspected, and signed off in the log book by an authorised inspector, (Airmasters, BMAA, or LAA).

8. The Maintenance Manual requires inspection and checking of the bolt torques at every 50 hour interval thereafter.