

SERVICE LETTER – MOSTER185

Noise of the exhaust manifold



Applicability

Engine model	Production period / Serial number
Moster185 (all models)	MY25 version

1. Reason

The purpose of this Service Letter is to provide clarification regarding a temporary exhaust manifold noise that may be experienced in the middle range of the Moster185 MY25 engines during the initial operating hours. The noise originates from the mechanical interface between the bronze spherical joint and its mating socket within the exhaust manifold assembly. Due to normal manufacturing tolerances, welding distortions and the natural geometry of new components, the resonance may require a short period to disappear after the first ignition: in other terms, the optimal mechanical fit will be achieved after some minutes of use. As described in the engine manual, the recommended ground break-in procedure allows all engine and exhaust components to stabilize through normal thermal cycles and mechanical settling. During this process, the contact surfaces progressively adapt to each other while the entire exhaust system (including springs, mounts, metal elements and other connected components) reaches its normal operating condition. As a result, any temporary resonance or metallic noise progressively disappears without requiring any maintenance action. This condition does not affect engine reliability, durability, performance or safety.

2. Subject

This Service Letter provides information regarding a temporary exhaust manifold resonance that may be noticed on the Moster185 MY25 engines at cold engine temperature during the first operating hours. The phenomenon is most noticeable during engine speed transitions, particularly between idle and higher RPM, and is considered a normal mechanical settling condition.

3. Identified risks and consequences

The characteristics of this condition are as follows:

- Temporary mechanical resonance at cold temperatures: a limited number of engines may produce a metallic noise generated by the interaction between the bronze spherical joint and its mating socket at low engine temperatures before the components have fully bedded in.
- Normal mechanical settling: during the first operating hours, thermal expansion, repeated heating and cooling cycles, and the natural bedding-in of the exhaust assembly progressively improve the contact between components, eliminating the resonance.
- No damage to the engine: this temporary noise does not cause wear, damage or degradation of the exhaust system or any engine component. It has no effect on engine performance, reliability, durability or operational safety.
- No corrective action required: the exhaust assembly must not be disassembled, modified or lubricated solely because of this temporary noise. Under normal operating conditions, the resonance disappears automatically after the initial break-in period.

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- Maintenance considerations: the same temporary noise may reappear for a short period after maintenance involving removal, cleaning, lubrication or replacement of the exhaust spherical joint. This is a normal consequence of the renewed bedding-in process and typically disappears more quickly than during the initial engine break-in.
- Persistent noise after break-in: if the resonance continues after the recommended break-in period, or after few hours of the last exhaust motion or maintenance, the complete engine installation should be inspected. Attention should be given to the use of an approved propeller, correct engine installation, engine mounting hardware and all exhaust support components, as external vibration sources may amplify or induce resonance within the exhaust system.

4. Documented cases and consequences

Field experience and internal testing have shown that:

- The phenomenon affects only a limited number of engines (less than 5%). In most reported cases, the noise disappears naturally during the first minutes as the exhaust components complete their normal mechanical settling process.
- No abnormal wear, structural damage or reduction in engine performance has been associated with this temporary condition.

5. Enquires

Inquiries regarding this Service Letter should be sent to the VITTORAZI authorized Distributors, Service Centre or Aircraft Manufacturer in your area. A list of all VITTORAZI representatives is available on the Vittorazi website (www.vittorazi.com).