LIMBACH Flugmotoren	Technical Bulletin	47

Subject: Sticking intake valves

Affected engine models: All engine models:

L 2400 EB1.D
L 2400 EB1.AD

Background Information: Engine of the types mentioned above have recently experienced 2 engine failures due to intake valves sticking in the valve guides. Sticky deposits were found in parts of the induction system on the inside walls of the intake manifolds, as well as on the throttle shaft. A subsequent analysis of the deposits leave no doubt, that the deposits are formed by foreign materials dissolved in the fuel, which have caused sticking of the intake valves under the temperatures involved.

Priority: Before next flight

Compliance:

1. Visual inspection of the valve shafts. To do so:
   - Unscrew high tension leads from spark plugs.
   - Remove valve covers, inspect valve shafts through the spring windings visually. If any deposits (dark brown to black, laquer-like hard to gum-like sticky) are apparent,continue with step 2.
   - Unscrew spark plugs.
   - Turn crankshaft until the piston in the cylinder to be inspected is at half stroke (can be verified with a piece of wire trough the spark plug hole)
   - Remove rocker arm shaft.
   - Disassemble valve springs from the intake valves with spring tensioning tool.
   - Inspect valve shafts through the spark plug thread with an endoscope for deposits.
     To do so push valve into the valve guide to a maximum depth of 35 mm, measured from the end of the shaft to the top of the valve guide (if the pistons are at half-stroke, the valve cannot fall into the engine) If deposits are found, continue with step 2.
2. If the deposits are found on the valve stems, the engine must be removed and the following components must be cleaned in the disassembled state: carburetor, induction system, cylinder head, pistons, piston rings, cylinders, mechanical fuel pump and fuel lines.
   If no deposits are found on the valve stems, the engine may be reassembled and put back into service.
   For instructions see service literature (Maintenance Instructions No.: 9, 10 and 12 in the valid issue, Repair Manual)

Remarks: The measures for compliance can only be carried out by the engine manufacturer or organisations autorized by the engine manufacturer. For airframe related parts of the fuel system see Technical Bulletin No.: A31-10-021 from the Stemme company

This document has been translated to the best of our knowledge. In case of doubt however only the german original shall be considered authoritative.

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