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MANDATORY
SERVICE
BULLETIN

MANDATORY SERVICE BULLETIN Z143L/31a-Rev.1

Technical content of the document approved
on the basis of DOA Approval No. EASA.21J.110

1. DATE: July 2, 2008

2. APPLICABLE TO: All Z143L aircraft

3. REASON: A possibility of cracks creation on the vortex inserts inside the carburettor heating system heat exchanger.

The heat exchanger, which supplies the carburettor heating system with warm air, is equipped with vortex inserts. These vortex inserts have been manufactured of aluminium alloy till Z143L aircraft, S/N 0044. Due to some cracks have been found on the vortex inserts on several aircraft, the material of the insert has been changed. From Z143L aircraft, S/N 0045, vortex inserts are produced of stainless steel.

At Z143L aircraft operation, it has happen a case when a crack was not discovered in time during regular prescribed 100-hour inspection.

To assure discovering a possible crack in time, it is necessary to perform the inspection of the vortex inserts inside the carburettor heating system heat exchanger on each Z143L aircraft from S/N 0001 to S/N 0044 (inserts of aluminium alloy) and describe the procedure of prescribed inspection with more precision.

In case a crack or loosen or missing rivet is found, the inserts shall be immediately replaced with new ones made of stainless steel.

Note.: This Revision 1 of the Z143L/31a bulletin specifies correct amount of the material prescribed in paragraph 9.2 MATERIAL.

4. ACTIONS REQUIRED:

4.1 Inspection of the vortex inserts inside the carburettor heating system heat exchanger.

On each Z143L aircraft from S/N 0001 to S/N 0044 (on which carburettor heating system heat exchangers with vortex inserts of aluminium alloy have been installed), the inspection of these vortex inserts shall be performed.

4.2 Replacement of vortex inserts.

In case a crack or loosen or missing rivet is found on the insert of aluminium alloy, the inserts shall be immediately replaced with a new ones made of stainless steel.

4.3 Regular inspections of the vortex inserts inside the carburettor heating system heat exchanger (both of aluminium alloy or of stainless steel) during further aircraft operation.

Regular inspections of the vortex inserts inside the carburettor heating system heat exchangers (valid both for vortex inserts of aluminium alloy and of stainless steel) after each 100 flight hours of aircraft operation shall be performed according to revised sheets of the Z143L Maintenance Manual, where the inspection is described with more precision.

5. ACCOMPLISHMENT:

5.1 Inspection of the vortex inserts inside the heat exchanger.

Immediately after bulletin receipt.

5.2 Replacement of vortex inserts.

Immediately in case a crack or loosen or missing rivet is found on the insert of aluminium alloy.

5.3 Regular inspections of the vortex inserts inside the carburettor heating system heat exchanger (both of aluminium alloy or of stainless steel) during further aircraft operation.

Replacement of sheets in accompanying documentation - immediately after bulletin receipt.
Regular inspections - according to revised accompanying documentation.

6. PERFORMED BY:

6.1 Inspection of the vortex inserts inside the heat exchanger.

Operator.

6.2 Replacement of vortex inserts.

Operator (in case a crack or loosen or missing rivet is found).

6.3 Regular inspections of the vortex inserts inside the carburettor heating system heat exchanger (both of aluminium alloy or of stainless steel) during further aircraft operation.

Operator.

7. COSTS COVERED BY: Operator

8. PROCEDURES:

8.1 Inspection of the vortex inserts inside the carburettor heating system heat exchanger.

Remove carburettor heating system heat exchanger.
Check all vortex inserts inside the heat exchanger for cracks and related rivets for loosening.

8.2 Replacement of vortex inserts.

Replace all vortex inserts of aluminium alloy with the new of stainless steel in case a crack or loosen or missing rivet is found on them:
Drill off pertinent rivets on all vortex inserts of aluminium alloy and remove these vortex inserts.
For riveting the new vortex inserts, drill the holes of ∅3.3 mm (for rivets of ∅3.2 mm).
Rivet new vortex inserts of stainless steel using blind rivets of stainless steel.

8.3 Regular inspections of the vortex inserts inside the carburettor heating system heat exchangers (both of aluminium alloy or of stainless steel) during further aircraft operation.

Replace original sheets of manuals by new pages. Record change accomplishment into List of Changes.
Regular inspections - according to revised accompanying documentation.

9. MATERIAL:

9.1 Inspection of the vortex inserts inside the heat exchanger.

No material needed.

9.2 Replacement of vortex inserts.

Based on order of operator, the aircraft manufacturer will supply following material, number of pieces is stated for 1 aircraft:

- Vortex inserts of stainless steel, P/N L143.6629-00.04, 4 pcs
- Blind rivets of A2 stainless steel, Avdel BE110408, ∅3.2x6, 16 pcs

9.3 Regular inspections of the vortex inserts inside the carburettor heating system heat exchanger (both of aluminium alloy or of stainless steel) during further aircraft operation.

10. ENCLOSURES:

New page 75-7 of the Z143L Maintenance Manual, Doc. No. 005.021.1 (Czech version) and Z143L Maintenance Manual, Doc. No. 005.022.1 (English version) with correct specification of prescribed amount of the material has been delivered by means of the Mandatory Service Bulletin Z143L/34a within Rev. 11 of Z143L Maintenance Manual (date of issue March 15, 2008)

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