ASK 21 Mi
Technical Note
TN No. 03

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Subject: Lithium iron phosphate batteries used as engine batteries

Applicability: ASK 21, EASA TCDS EASA.A.0221, variant ASK 21 Mi, all serial numbers

Urgency: None, on customers request

Classification: Minor Change

Reason: To enable crews to fly in the ASK 21 Mi, which would exceed the maximum payload, the standard lead-acid engine batteries located under the front pilot's seat can be replaced with encapsulated batteries with lithium iron phosphate cathodes (LiFe-PO4).

Since the capacity of LiFe-PO4 batteries is about one-third lower, the connection between the engine battery and the avionics battery selector switch is disconnected.

Action: Replacement of the two 12V/12Ah lead batteries with two LiFe-PO4 batteries with a nominal voltage of 13.2V, a capacity of at least 4.6Ah and a permissible discharge current of at least 44Ah.

Disconnecting the connection between the engine batteries and the avionics battery selector switch.

Exchange of the following manual pages with the revision status “TN3 / 01.07.09”

Maintenance Manual: 2.22, 2.23 Flight Manual: 7.27, 7.31

Supplementing the maintenance manual with the pages 13.E.1 and 13.E.2 from 01.07.09. Enter these pages in the table “List of Inserted Supplements” on page 13.2

Material and Drawings: See under action.

Mass and Balance: The new mass and C.G. must be determined. The mass (weight) and balance form (page 6.3 in the flight manual) and the data placards in the cockpit must be updated. The mass (weight) and balance form must indicate the type of battery used for weighing.

Notes: All actions are to be inspected by certifying staff according to Commission regulation (EC) 2042/2003 Part M / Part 66 [1] in the scope of a modification and must be certified in the inspection documents and in the logbook. The change of the manual pages must be entered on the page „Record of Revisions“ and in the „List of effective pages“.

As an alternative to this TN, almost the same weight savings can be achieved by removing the batteries in the wing roots and also operating the avionics via the conventional lead-acid engine batteries.

Poppenhausen, 01.07.09

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The German original has been approved by the EASA at the date of the 09.07.09 with the Minor Change Approval EASA.A.C.12595.

[1] As long as no provisions for certifying staff for sailplanes and powered sailplanes were laid down, relevant legislation of the member states is applicable (§66.A.100).