

SERVICE INFORMATION

No. SI 42NG-039/1

NOTE: SI's are used only:
1) To distribute information from DAI to our customers.
2) To distribute applicable information/documents from our suppliers to our customers with additional information.
Typically there is no revision service for SI's. Each new information or change of that will be sent along with a new SI.

I. TECHNICAL DETAILS

1.1 Airplanes affected:

All DA 42 NG /M-NG airplanes

1.2 Subject:

Induction System – Abnormal/Emergency Procedures – Alternate Air when encountering Induction Filter Icing

ATA-Code: 71-60

1.3 Reason:

Power losses because the alternate air valve was not opened.

1.4 Information:

The DA 42 NG/M-NG has been approved for flight into known icing conditions by EASA in June 2009. Since then more than 110 airplanes equipped with the anti-icing system have been delivered world-wide.

In Europe's winter season of 2011/2012 three ECU A/B Caution events followed by an un-commanded power reduction during flight in snow and icing conditions have been reported to DAI. The power reduction healed itself when descending into warmer air masses. In all three cases the alternate air valve was not opened by the pilot as requested by the Airplane Flight Manual (AFM) Emergency Procedures.

Shortly after that another similar event was reported to DAI. Again, the pilots did not go through the full emergency check list and did not open the alternate air valve. Post flight inspection revealed evidence of induction filter icing. Light icing conditions were reported but rain, thunderstorms and snow was in close proximity to the airplane.

From the reported weather conditions during all four reported events no systematic issue could be derived neither could it be determined if the weather conditions were within the certified icing envelope. In any case, safety is not jeopardized, as exactly for such cases, the alternate air system is designed.

With this Service Information DAI emphasizes the full application of emergency procedures as published in the AFM.

In addition DAI reacted to the above mentioned events with a revision of the AFM Supplements S03 "Ice Protection System" Chapter 4B (AFMS S03, Revision 3 for the DA 42 NG and Revision 1 for the DA 42 NG with MÄM 42-600 installed).

Further analysis of the situation suggested revising Chapter 4A "Normal Procedures" of the main AFM rather than Chapter 4B "Abnormal Procedures" in the AFMS S03, since in no case ice accretion was present at the airframe and there was no clear indication of flight in icing conditions.

AFM Temporary Revision TR-MÄM-42-701 was published and the AFMS S03 were revised again (AFMS S03, Revision 4 for the DA 42 NG and Revision 2 for the DA 42 NG with MÄM 42-600 installed).

With the revisions of the AFM Procedures, the opening of the alternate air valve is a preventive action against possible induction filter icing rather than a reaction to un-commanded power reduction in the emergency procedure "Abnormal Engine Behavior".

All pilots and operators are reminded to always use the latest published AFM and Supplements. For download please visit our website www.diamond-air.at.

II. OTHERS

In case of doubt contact Diamond Aircraft Industries.