

MANDATORY SERVICE BULLETIN



Service Bulletin No.: DAC1-73-05 Rev 1

Date Issued: 1 November 2007

Date Revised: December 14, 2007

Title: Operating Limitations with Altitude
Compensating Fuel Systems

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1. ATA Code: 7300

2. Effectivity: DA20-C1 aircraft, serial number C0001 to C0473 if equipped with altitude compensating fuel systems (TCM IO-240-B13B and B17B engine configurations).

3. General: The purpose of the mandatory service bulletin is to define the requirements, that if complied with, permit operation in accordance with the revised limitations of AFM DA202-C1 Rev. 23.

3.1 Background Information There has been several recent in-flight engine power losses reported. All cases were at idle, with low propeller speed due to maneuvers being performed. As a precautionary safety measure, pending investigation, Diamond released AFM DA202-C1 Rev 22 and Transport Canada issued AD CF-2007-27, limiting all DA20-C1 aircraft equipped with altitude compensating fuel systems from performing certain flight maneuvers.

In all recent cases, the fuel injection system components had recently been installed and/or serviced. In all recent cases, significant levels of foreign object contamination were found in fuel system components, including the fuel metering unit (throttle body) and manifold valve (flow divider). Such contamination can sufficiently disrupt fuel flow causing power loss, especially at low throttle settings.

In 2 cases, a new mechanical fuel pump had been installed without transferring the inlet screen filter from the replaced pump to the newly installed pump.

4. Compliance: Compliance to be performed by March 31, 2008 or within next 100 aircraft operating hours, whichever comes first.

5. Approval: Engineering data referenced or contained in this service bulletin is approved as part of the type design.

6. Labour: Approximately 1 hour labor will be required if no component change is involved. Approximately 6 hours will be required if component change is involved.

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7. Material:	Part Number	Description	Qty
	22-1130-00-38	Placard, Operating Limitations	1
	22-1130-00-39	Placard, Spinning Limitations	1
	22-1130-00-40	Placard, Altitude Compensating System	1
	656143-1	Filter, Fuel Pump Inlet	1 (if not installed, Ref. 10.3.1)

8. Special Tools: None

9. References: DA20 Maintenance Manual, Document number DA201-C1.
DA20 Aircraft Flight Manual, Document number DA202-C1, Rev 23.
TCM Service Information Letter SIL05-6
TCM Service Information Directive SID07-3
TCM SID07-10 IO240B Fuel System Component Installation
TCM SB07-9 IO240B Inline Fuel Filter Reorientation

10. Accomplishment Instructions:

- 10.1** A review of the service history is required for each affected aircraft for which this mandatory service bulletin is effective.
- 10.2** If any engine fuel system components currently installed on the aircraft have been in service for less than 100 aircraft operating hours,
OR
If there has been engine operating abnormalities, including unstable fuel system set-up or inconsistent idle operation, in the last 100 aircraft operating hours;

Perform TCM SID07-10.

Note: If there are current operating abnormalities, including unstable fuel system set-up or inconsistent idle operation, it is recommended to strictly comply with the limitations of AFM DA202-C1 Rev. 22 and to comply with TCM SID07-10 as soon as possible. It is the responsibility of the operator to determine serviceability of the airplane. If in doubt contact Diamond Customer Support

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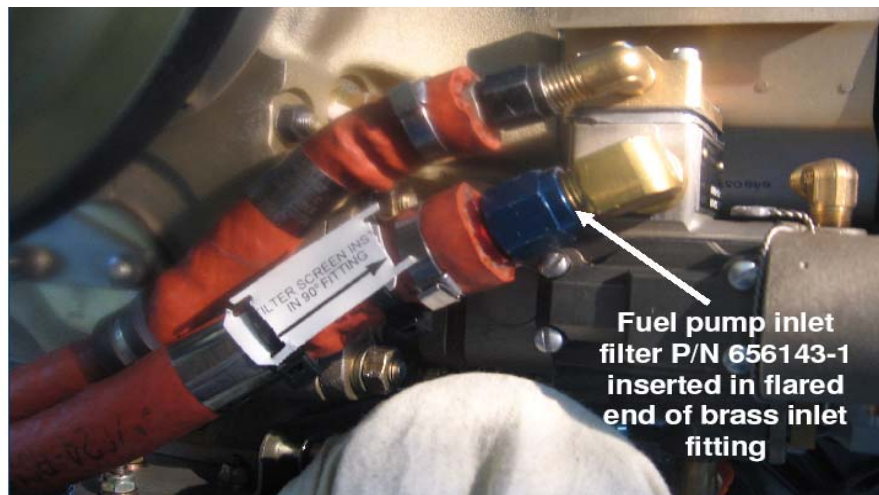
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- 10.3** If the mechanical fuel pump (part number 649368-49A1, 649368-52A1, or 649368-54A1) has been replaced since delivery; remove mechanical fuel pump inlet hose to verify installation of filter element P/N 656143-1. If filter is installed, do not remove (see photo of installed filter). Inspect filter with a flashlight and mirror for contaminants. If clean, then reattach fuel line. If required, remove and clean filter. Reinstall filter and reattach fuel line.

- 10.3.1** If filter is not installed, install P/N 656143-1. Ref SIL05-6



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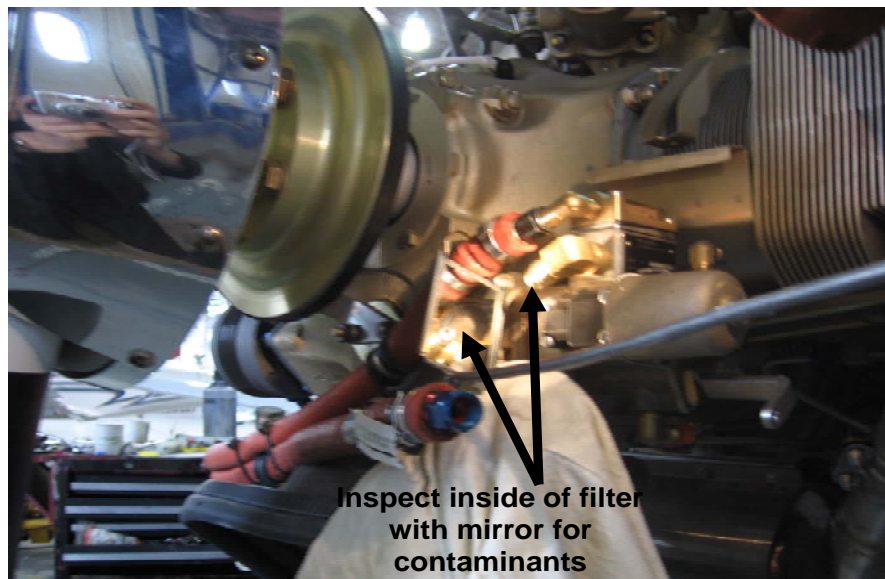
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- 10.4** Perform in-line filter housing orientation change in accordance with TCM SB07-9.
- 10.5** Remove installed placards P/N 22-1130-00-37, P/N 22-3911-00-36 & P/N 22-1130-00-33.
- 10.5.1** Install placards 22-1130-00-38, 22-1130-00-39 & P/N 22-1130-00-40 (locate placards in same location as placards 22-1130-00-37, 22-3911-00-36 and P/N 22-1130-00-33 removed in previous step, respectively).
- 10.5.2** Install AFM Rev 23
- 10.5.3** Make the following log book entry:

"Complied with Diamond MSB DAC1-73-05 **Rev 1.**"

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- 11. Weight and Balance:** The weight and balance is not affected by this Service Bulletin.
- 12. Labor Credit:** Contact Diamond Aircraft.
- 13. Availability:** Contact Diamond Aircraft.

To obtain satisfactory results, procedures specified in this service bulletin must be accomplished in accordance with accepted methods and current government regulations. Diamond Aircraft Industries Inc. cannot be responsible for the quality of work performed in accomplishing the requirements of this service bulletin. Diamond Aircraft reserves the right to void continued warranty coverage in the area affected by this service bulletin if it is not incorporated.

If you no longer own the aircraft to which this service bulletin applies, please forward it to the current owner and send the name of the current owner to Diamond Aircraft Industries Inc. at the address below.

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