ALERT SERVICE BULLETIN

Diamond AIRCRAFT

Service Bulletin No.: DA20-73-02A, Rev. 0 **Date Issued:** April 17,1997

Title: Fatigue, Engine Fuel Pump Outlet

1. ATA Code: 7310

2. Effectivity: DA 20-A1 aircraft S/N 10093 to 10296.

3. General: This service bulletin addresses the possibility of early fatigue of the engine driven fuel pump outlet fitting. An inspection of the 'Fuel Distribution Block', 'Compensating Tube' and a check for fuel line preload is required.

4. Compliance: Part 10.1: Prior to next flight.
Part 10.2: At next 100 hour inspection.

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

6. Labor: 1.0 man hours.

7. Material:

Part Number	Description	Qty
950-141	Crush Washer	5
924-540	Compensating Tube	1
996-592	Fuel Pump	1
1181	Shim	1"

The parts listed above may be ordered individually as required.
Loctite 222 required - Procure locally

8. Special Tools: Not Applicable.

9. References: Doc #DA201 Maintenance Manual. ROTAX 912F Maintenance Manual

10. 1 Accomplishment Instructions:

10.1.0 Remove the upper cowling.

10.1.2 Check that the 'Fuel Distribution Block' (FDB) mounted to the carburetor 'Compensating Tube' (CT) is secure (No lateral movement along CT)

10.1.3 Check that the copper shim is installed. Evidence of the copper shim can be seen at the opening of the clamp portion of the FDB.

10.1.4 Check that there are no chafing marks indicating relative motion of the FDB and CT.

10.1.5 If 10.1.2 to 10.1.4 are OK. reinstall the upper cowling and return the aircraft to service.

10. 1 Accomplishment Instructions continued:

10.1.6 If the shim is missing, and/or the FDB is not secure, but there is no evidence of relative motion (i.e. chafing), then install the shim (Copper tape wrapped once around CT). Apply Loctite 222 to the FDB mounting screw .Tighten the FDB screw so that the FDB is not able to move laterally along the CT. Reinstall the upper cowling and return the aircraft to service.

10.1.7 If there is evidence of relative motion (i.e. chafing), replace the fuel pump as per ROTAX 912F maintenance manual. Replace the CT if it is worn excessively.

10. 2 Accomplishment Instructions:

WARNING: Extinguish any source of heat or open flame before working on the fuel system.

10.2.0 Remove the upper cowling.
Disconnect the battery (negative lead first) and remove from aircraft.
Close the fuel shutoff valve.

10.2.1 Remove the lower banjo bolt from the FDB and check that the fuel lines align naturally with the FDB inlet. The lines should not be preloaded when the banjo bolt is installed.

CAUTION: Do not bend fuel pump outlet fitting. Disconnect the fuel line from the pump or support the line properly while bending.

CAUTION: Inspect for kinked fuel lines. If any of the lines are kinked replace them.

10.2.2 If the fuel lines are not aligned, gently reshape the lines as required until they align properly and can be assembled to the FDB without introducing preload to the fuel lines

10.2.3 Reinstall the banjo bolt with new copper crush washers.

10.2.4 Reinstall the battery and connect the leads (positive lead first).
Open the fuel valve.

10.2.5 Run the electric fuel pump to check for fuel leaks around the FDB and the engine driven pump.

10.2.6 Install the upper engine cowling.

10.2.7 Run the engine and check for proper operation of the fuel system.

10.2.8 Make the appropriate log book entry.

11. Weight and Balance: Not Applicable.

12. Electrical Load Data: Not Applicable.

13. Credit: A full parts and labor credit will be issued upon receipt of a completed warranty claim form returned to Diamond Aircraft with the removed parts (It is not necessary to return crush washers) no later than July 30, 1997.

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 Industries Inc. 1560 Crumlin Sideroad, London, Ontario, Canada N5V 1S2
Phone: (519) 457-4041 Fax: (519) 457-4045