

# ALERT SERVICE BULLETIN



**Service Bulletin No.:** DAC1-61-00A Rev 1

**Date Issued:** April 2, 2001

**Title:** Spinner Rear Bulkhead Replacement

**Page:** 1 of 6

## DIAMOND AIRCRAFT HIGHLY RECOMMENDS COMPLIANCE

**1. ATA Code:** 6100

**2. Effectivity:** Diamond Aircraft Model DA 20 C1 aircraft Serial Numbers C0001 to C0108 with a Sensenich model W69EK-63 propeller installed (3/8" attachment bolts).  
This Service Bulletin is not applicable if Diamond Aircraft Service Bulletin DAC1-61-01 has been complied with.

**3. General:** This Alert Service Bulletin addresses the replacement of the propeller rear spinner bulkhead and shim removal. The new rear spinner bulkhead offers a higher friction coefficient and improved resistance to fretting.

**PART 1** Visual inspection of propeller assembly to determine applicability of Part 2.

**PART 2** Describes the procedure for the replacement of the rear spinner bulkhead and/or shim removal.

**4. Compliance:** This Alert Service Bulletin should be accomplished within the next 10 hours of aircraft operation.

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

**6. Labour:** Approximately 1 hour will be required to accomplish this Service Bulletin.

**7. Material:** For accomplishment of PART 2. If replacement is required.

**Qty:**

1

**Description:**

Painted Spinner Rear Bulkhead  
(painted completely both sides)

**Part Number:**

C-2397P

**8. Special Tools and Materials:** dial type torque wrench  
de-natured alcohol

# ALERT SERVICE BULLETIN



Service Bulletin No.: DAC1-61-00A Rev 1

Date Issued: April 2, 2001

Title: Spinner Rear Bulkhead Replacement

Page: 2 of 6

**9. References:** W69EK-CF - Wood Propeller for Diamond DA-20-C1 Aircraft: with 3/8" Bolt Attachment: Installation, Operation & Maintenance.

DA201-C1 Aircraft Maintenance Manual, Chapter 61

## 10. Accomplishment Instructions:

**PART 1: Verification if replacement of bulkhead and/or shim removal is required**

**10.1.** Remove upper cowling

**10.2.** Examine aft face of rear spinner bulkhead. If the aft face of the bulkhead does not have white paint on it where the propeller extension attaches to the propeller or is completely bare of paint, **PART 2 must be accomplished**. If positive identification can not be determined the propeller must be removed and rear bulkhead identified. **Refer to figure 1.**

**10.3.** If it has been determined that the bulkhead has been replaced with a completely painted rear bulkhead, it must now be determined whether a shim is installed or not. If the shim is present it must be removed.

**10.4.** Remove the forward spinner dome. Look to see if there is an anodized aluminum shim located between the rear spinner dome and the propeller, this shim if present has a smaller center hole than the hub bore in the propeller and will be readily visible. If the shim is present it must be removed. Follow the procedure in Part 2 with the exception of the rear spinner bulkhead replacement. **Refer to figure 2.**

**PART 2: Replacement of non-painted rear spinner bulkhead and removal of a shim.**

### **WARNING**

**Make certain that magneto switch is off, and that both magnetos are grounded**

## ALERT SERVICE BULLETIN



**Service Bulletin No.:** DAC1-61-00A Rev 1

**Date Issued:** April 2, 2001

**Title:** Spinner Rear Bulkhead Replacement

**Page:** 3 of 6

- 10.5. Index mark the front spinner dome and rear spinner dome to aid installation. Remove the front spinner dome. Cut safety wire and remove wire from bolt heads.
- 10.6. With a calibrated dial type torque wrench, check bolt torque by applying the torque in a bolt tightening direction until the bolt begins to turn. Record the results. **IMPORTANT!** Improper torque values will be obtained by measuring the breaking torque in a bolt loosening direction.
- 10.7. Loosen and remove bolts, then remove pressure plate and spinner rear dome.
- 10.8. Remove propeller from flange. A slight rocking may be necessary to remove propeller if tight on the flange. Be careful during the removal; if the propeller is tight on the flange it is possible to tear out the back of the hub around the center bore and bolt hole counterbores.
- 10.9. Clean both propeller hub faces using light grit scotch pad and de-natured alcohol. It should be possible to remove most of any fretting marks and darkened areas.
- 10.10. Inspect the rear propeller hub face for cracks and or elongation of the bolt hole counterbores where the engine flange drive bushing are inserted.

### **NOTE**

**Cracks** – If cracks are evident on the hub face, further examination will be necessary to determine whether the cracks are in the paint surface and/or in the wood. If cracks are found in the wood the propeller must be returned to Sensenich for further inspection.

**Counterbore Elongation** - The counterbores will naturally elongate as the wood will shrink and expand differently with and against the grain. When inspecting the counterbores, look for a ridge about 0.4" deep from the hub face that would indicate that the flange drive bushings were hitting against the side. If the ridge is severe then the propeller must be returned to Sensenich for closer inspection.

# **ALERT SERVICE BULLETIN**



**Service Bulletin No.:** DAC1-61-00A Rev 1

**Date Issued:** April 2, 2001

**Title:** Spinner Rear Bulkhead Replacement

**Page:** 4 of 6

- 10.11. Install the painted rear spinner backing plate, propeller and spinner following the instructions provided in the Sensenich Installation Operation & Maintenance Manual.
- 10.12. Following the propeller installation the attachment bolt torque must be checked following the Sensenich Installation Operation & Maintenance Manual.
- 10.13. **Upon completion, the assembly should have a completely painted rear bulkhead with no shim.**

## **WARNING**

**THE HUB OF A WOODEN PROPELLER WILL SHRINK OR EXPAND TO MATCH THE AMBIENT CONDITIONS. EXCESSIVE HUB SHRINKAGE, ESPECIALLY POSSIBLE DURING VERY COLD AND/OR DRY AMBIENT CONDITIONS CAN RESULT IN LOSS OF PROPELLER BOLT TORQUE (PRE-LOAD). THIS CAN ALLOW SLIGHT MOVEMENT RELATIVE TO THE DRIVE FLANGE, WHICH MAY RESULT IN DAMAGE TO THE PROPELLER AND/OR THE PROPELLER BOLTS, AND POSSIBLY EVEN LOSS OF THE PROPELLER! TO PREVENT THIS, PROPER INSTALLATION AND PERIODIC RE-TORQUING IN ACCORDANCE WITH ALL APPLICABLE MAINTENANCE INSTRUCTIONS IS NECESSARY.**

**UNDER ALL CIRCUMSTANCES THE INSPECTION INTERVAL MUST NEVER EXCEED 50 HOURS. EXTREME CHANGES IN AMBIENT CONDITIONS (TEMPERATURE/HUMIDITY) MAY REQUIRE SHORTER INSPECTION INTERVALS.**

**11. Weight and Balance:** Not applicable

**12. Electrical Load Data:** Not applicable

**13. Credit: Labour Credit:** Not applicable

**Replacement Part Credit:** Credit for the replacement part will be issued upon return of the obsolete part with a completed warranty credit application.

# ALERT SERVICE BULLETIN

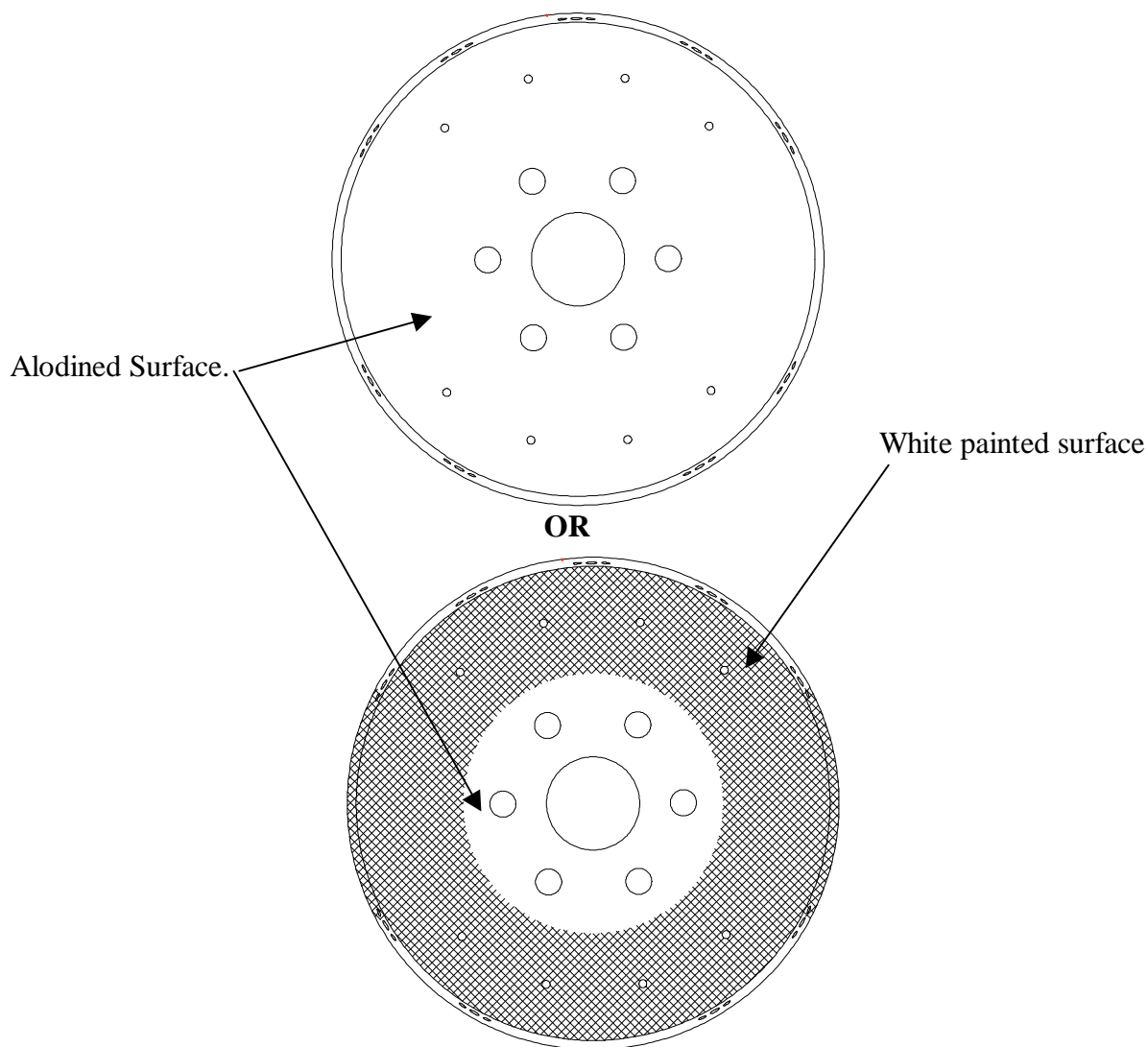


Service Bulletin No.: DAC1-61-00A Rev 1

Date Issued: April 2, 2001

Title: Spinner Rear Bulkhead Replacement

Page: 5 of 6



**Figure 1**  
**Obsolete Rear Spinner Bulkheads**  
**Looking Forward**

# ALERT SERVICE BULLETIN

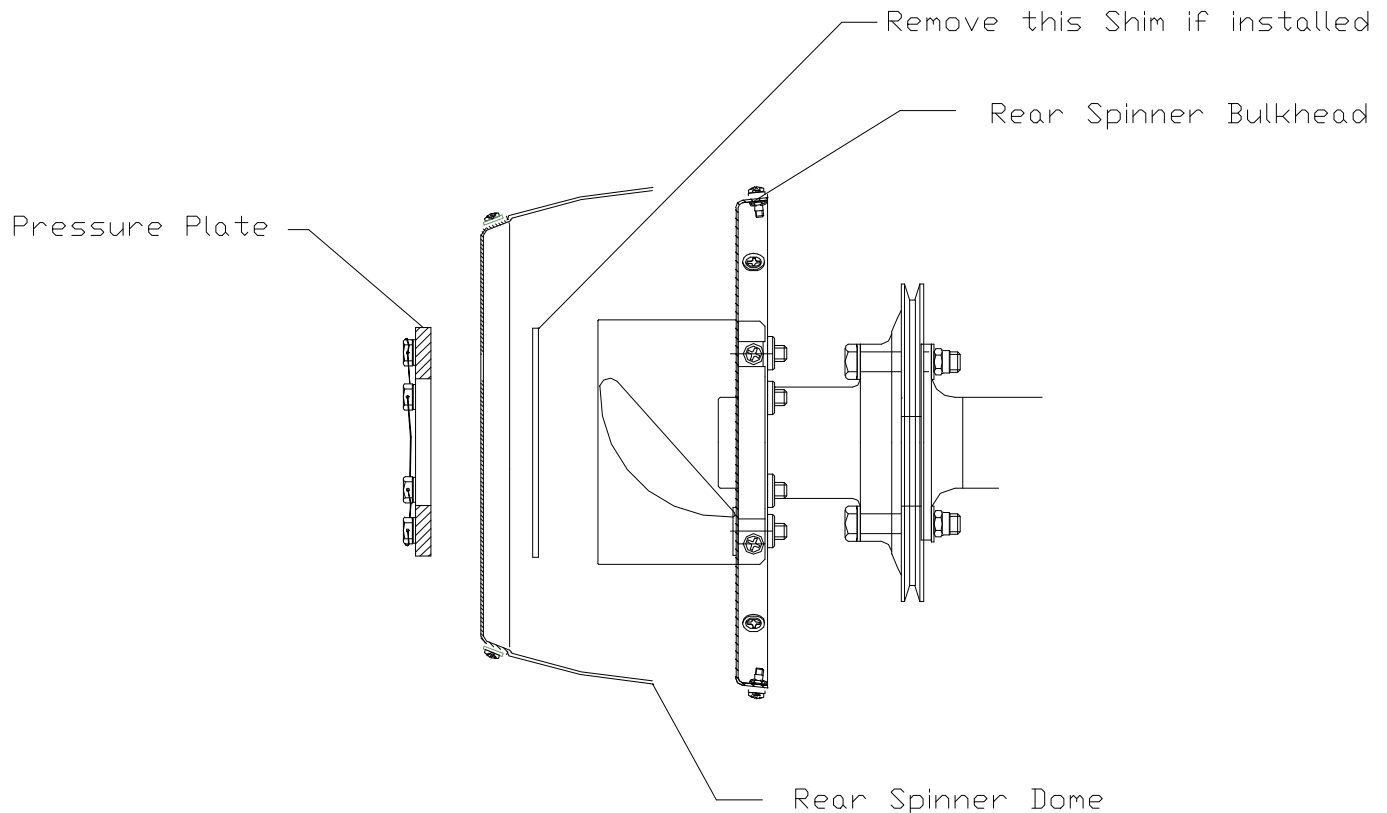


**Service Bulletin No.:** DAC1-61-00A Rev 1

**Date Issued:** April 2, 2001

**Title:** Spinner Rear Bulkhead Replacement

**Page:** 6 of 6



**Figure 2**  
**Side View**

*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.*

Diamond Aircraft Industries Inc. 1560 Crumlin Road, London, Ontario, Canada N5V 1S2

Phone: (519) 457-4041 Fax: (519) 457-4060

COPYRIGHT 2000