



# Twin Commander Aircraft LLC

## Maintenance Alert

02 September 2011

**Subject:** Corrosion of the Skin under the Dorsal Fin

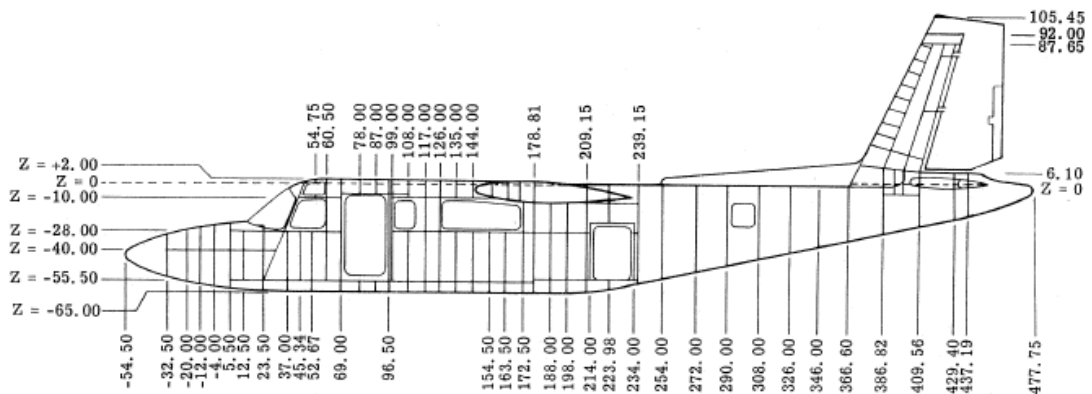
**Effectivity:** 690A 410071-1 S/N 11100-11127 -501 S/N 11128-11193, 11195-11248, 11250-11268  
 690A 410073-1 & -501 S/N 11194, 11249, 11269-11349  
 690B 410073-503, 505 & 507 S/N 11350 & Subs  
 690C 410080-1 S/N 11719 & Subs  
 690D 410080-1 S/N 15001 & Subs  
 695A 410080-1 S/N 96025 & Subs

**Reason:** It has come to our attention that some Aircraft with longer dorsal fins installed have been found to have excessive corrosion of the skin under the fin. The aircraft have been found with the corrosion at this location had the fin installed using a fay and or fillet seal around the periphery. This sealant application in some cases causes moisture to be trapped inside the dorsal fin, therefore causing corrosion of the aluminum skin. This maintenance alert is to ensure that aircraft at risk are checked.

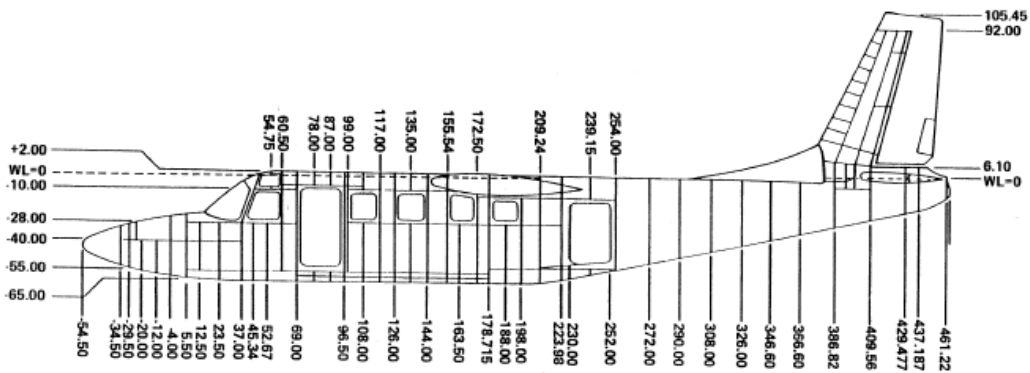
**Corrosion Damage Classifications:**

1. **LIGHT** Characterized by discoloration or pitting to a depth of approximately 0.002-inch maximum.
2. **MODERATE** Appears similar to light corrosion except there may be some blisters or evidence of scaling and flaking. Pitting depths may be as deep as 0.010-inch.
3. **SEVERE** General appearance may be similar to moderate corrosion with severe blistering exfoliation and scaling or flaking. Pitting depths will be deeper than 0.010-inch.

**Inspection:** The following figures show the dorsal fin styles that are potentially subject to the corrosion problem.



690A/B/C



690D 695A

**Action:** At the next scheduled maintenance event remove dorsal fin and inspect the fuselage skin under the dorsal fin for corrosion.

If only light corrosion is discovered, follow these steps to correct the condition:

1. Remove corrosion by light hand sanding. Do not exceed the depth of defect.
2. Corrosion Convert (Alodine) reworked area.
3. Prime complete area under the dorsal with epoxy based primer per manufacturers instructions.
4. Reinstall the dorsal fin and fillet seal outside edge to aircraft skin using cabin pressure type sealant as required to conceal any gaps.

If moderate or severe skin corrosion is found, replace the skin and then follow steps 3 and 4 above. Notify Twin Commander Aircraft LLC. Please provide the total time on the aircraft. Information gathered will assist in establishing an inspection interval.

Twin Commander Aircraft is in the process of developing a solution to prevent moisture buildup under the dorsal fin. Twin Commander will issue a service publication in the end of the third quarter of 2011.

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