



SERVICE ENGINEERING ALERT NOTICE

SEAN-007-2013

Date: January 22, 2013

AIRCRAFT AFFECTED: All CV340/440/640 Series Aircraft and Derivatives (580/5800)

SUBJECT: Cracking Of Wing Lower Surface Skin At End Rivet Of Access Door Doubler AT WS 6.

PURPOSE: The purpose of this Service Engineering Alert Notice is to inform registered owners/operators of CV340/440/640 and derivative aircraft of cracking in the wing lower surface skin at the access door doubler end fingers located between WS 5 and WS 6 that may have gone undetected. Cracking in this area is the subject of Convair Report ZS-340-1000 Structurally Significant Detail (SSD) 57-1-4.

REFERENCES:

1. Convair Report ZS-340-1000 Revision 1, dated April 15, 1991.
2. FAA AD 92-06-06

BACKGROUND:

ZS 340-1000 Revision 1 SSD 57-1-4 provides instructions for inspection of the wing lower surface skin at the end rivets of the access door doublers.

The inspections of Ref [1] are mandated by the Ref [2] Airworthiness Directive.

Per Ref. [1] SSD 57-1-4 the inspection of the lower surface skin at the end rivets of the access door doublers is an external inspection using visual or dye penetrant to be accomplished at an initial inspection threshold of 20,000 hours with repeat inspection to occur at 1,000 flight hour intervals.

An operator has reported finding a 28-inch long crack in the wing lower surface skin extending from a fastener location attaching the wing access door doubler aft finger to the lower surface skin, forward to a fastener location attaching Stringer 13 to the wing lower surface skin, as shown in Figure 1. The cracking was found during internal general inspection for corrosion.

An initial assessment has revealed that the external inspections specified by Ref [1] SSD 57-1-4 in the area of the access door doubler finger located between WS 5 and WS 6 are not effective.

The lower surface skin at the end rivets of the access door doublers is covered by the nacelle drag angle. In order to detect cracking of the wing lower surface skin in this area, internal inspections are required.

Kelowna Flightcraft Convaire Division considers cracking at this location as an airplane safety issue (potential of not being able to sustain limit load).

A service bulletin is being developed that will provide new inspection methods and intervals, as required, for detection of cracking of the wing lower surface skin at the access door doubler fingers located between WS 5 and WS 6.

It is expected that Transport Canada may issue a new AD to mandate accomplishment of the Service Bulletin.

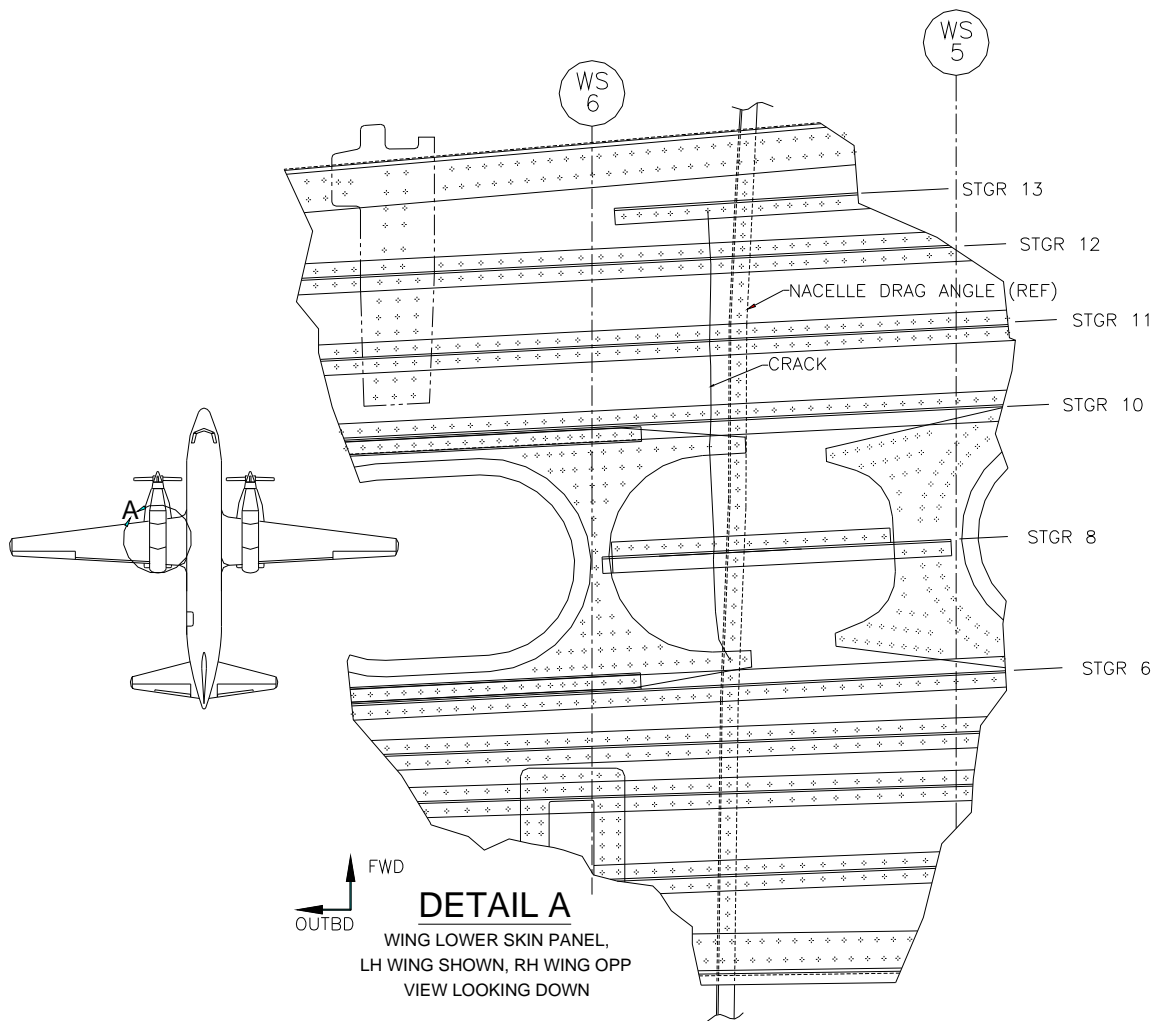


FIGURE 1 – Crack Location



RECOMMENDATIONS:

Pending release of the new Service Bulletin, Kelowna Flightcraft Convair Division recommends that operators accomplish a special inspection of the wing lower surface skin for cracks that may have gone undetected in the area of the access door doubler end fingers located between WS 5 and WS 6.

Kelowna Flightcraft Convair Division recommends accomplishment of this inspection as soon as possible.

Accomplish inspection on both the LH and RH wing as follows:

- 1) Gain access to the wing interior by removal of the WS 4 – WS 5 access panel.
- 2) Perform detailed visual inspection of the wing lower surface skin around the inboard side of the WS 6 – WS 7 access door doubler as shown in Figure 2.
- 3) If no cracks are discovered, reinstall parts removed in Step 1.
- 4) If cracks are discovered contact Kelowna Flightcraft Convair Division for repair.
- 5) Record inspection findings in Table 1. Report all inspection findings (negative or positive) to the Kelowna Flightcraft Convair Division
matt_palmberg@flightcraft.ca

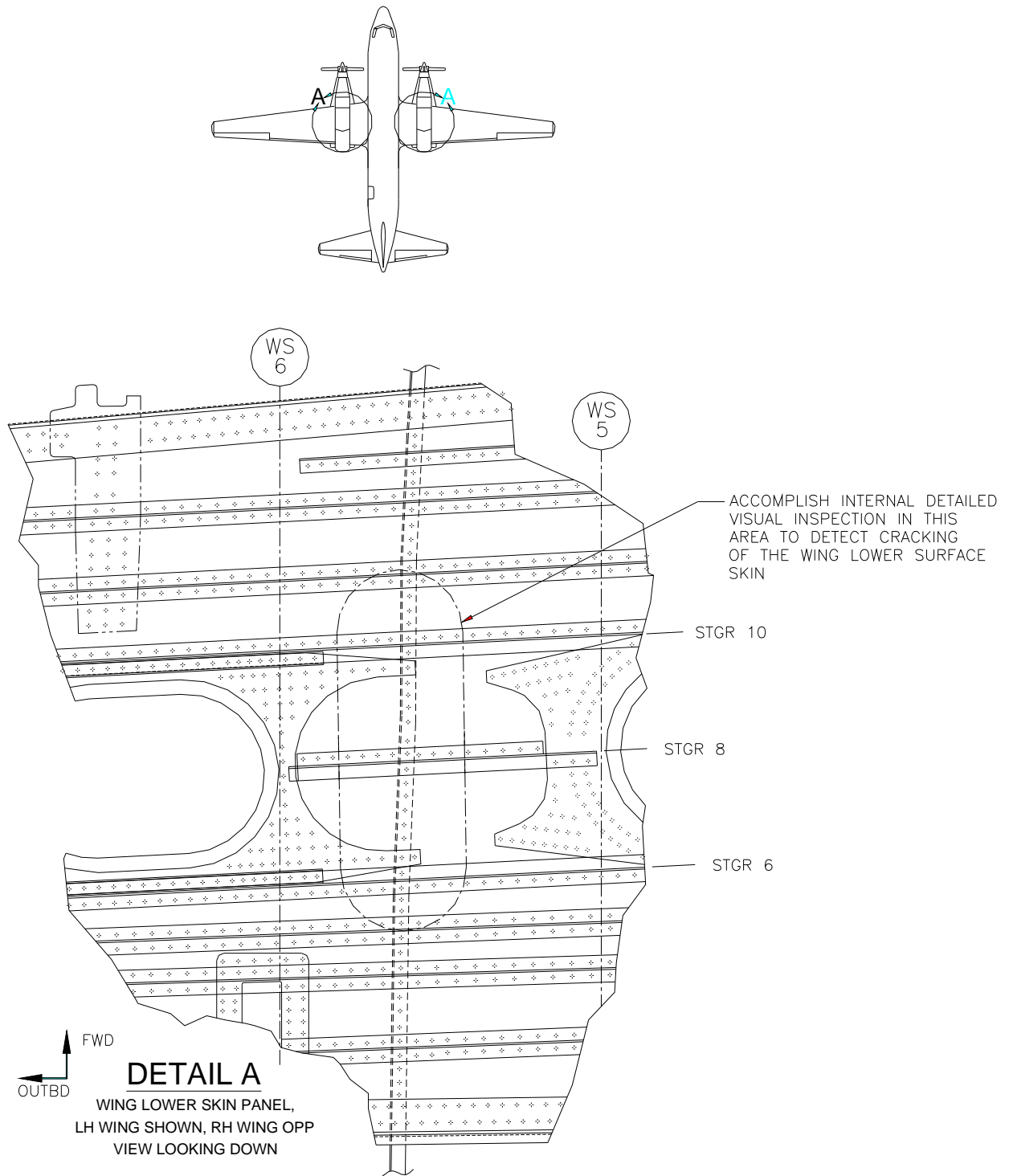


FIGURE 2: Inspection of Wing Lower Surface Skin Between WS 5 and WS 6



Table 1: Inspection Results

Serial Number	Hours	Cycles	Crack Detected		COMMENTS
			No	Yes	

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