

MAINTENANCE SAFETY BULLETIN

(STRICTLY FOR INTERNAL CIRCULATION AND TO ASSIGNED TECHNICAL HANDLER ONLY)

APPLICABILITY : All Engineering & Maintenance
MSB NUMBER : MSB 2022-003
DATE : 1 August 2022

SUBJECT: BELLY FAIRING SLIDING PANEL DISLODGED FROM GROOVE

DETAILS OF MSB

MAB had an incident on an A330 aircraft where the Left-Hand Torque Tube at Wheel Well area and Belly Fairing Sliding Panel 147AB was damage during retraction of Flap to full up position. Airbus in-service information reference no. 53.35.00030 was extracted to create awareness for all maintenance personals.

Background

The A330 aircraft was in the hangar for a maintenance check. The incident happens during completion of one of the maintenance tasks called out during the check. Inspections and investigations carried out on the belly fairing sliding panel failure have led to the following descriptions, findings, and recommendations.

This article intends to provide awareness and recommendations to prevent similar events.

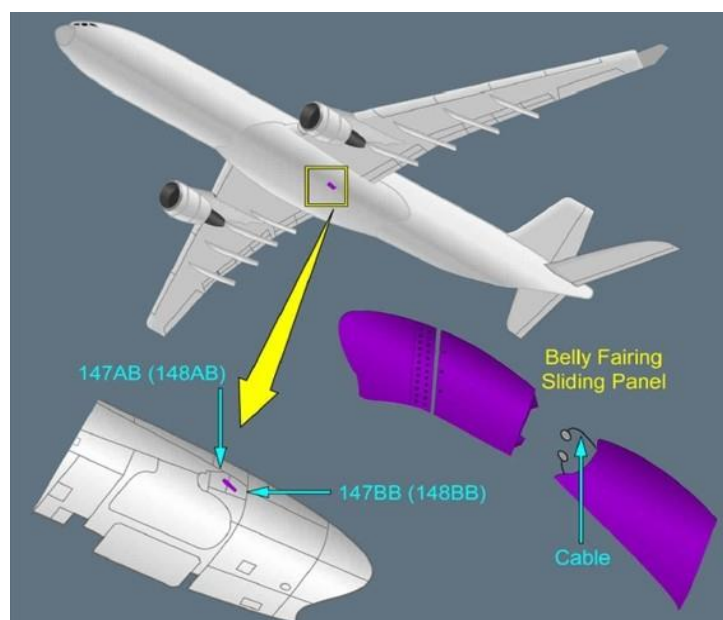


Figure 1: 147/148 AB/BB installed on aircraft – global view

Description

The sliding panel is part of the belly fairing.

The flap track one is located inside the belly fairing. To allow the flap deployment, the trunnion passes through a cut out in the belly fairing panel. The aerodynamic continuity of the cut-out is maintained by the sliding panel that moves together with the Flap, being connected to the Trunnion.

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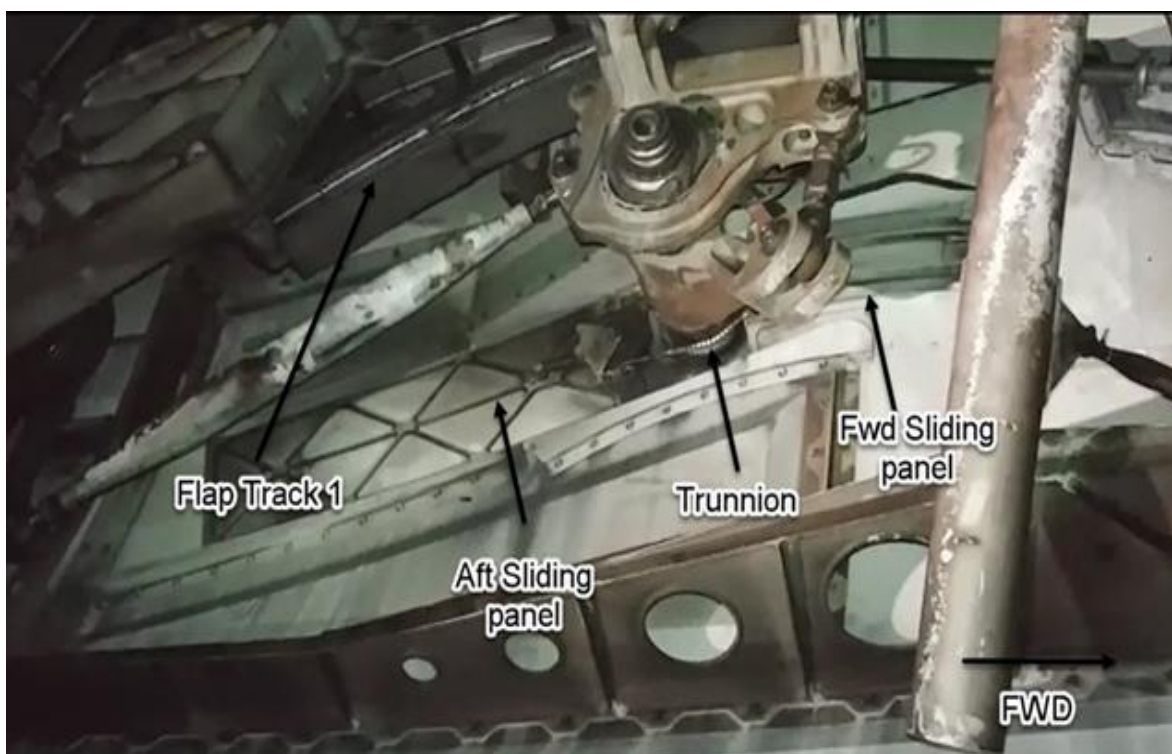


Figure 2: View from inside belly fairing



Figure 3: View from outside belly fairing (red line for flap in retracted position)

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Only forward sliding panel is considered in this article. Also called blanking assembly, it is part of Belly Fairing panel 148AB next higher assembly. It is described in IPC 53-35-03-54A and listed as item 170 for LH (180 for RH).

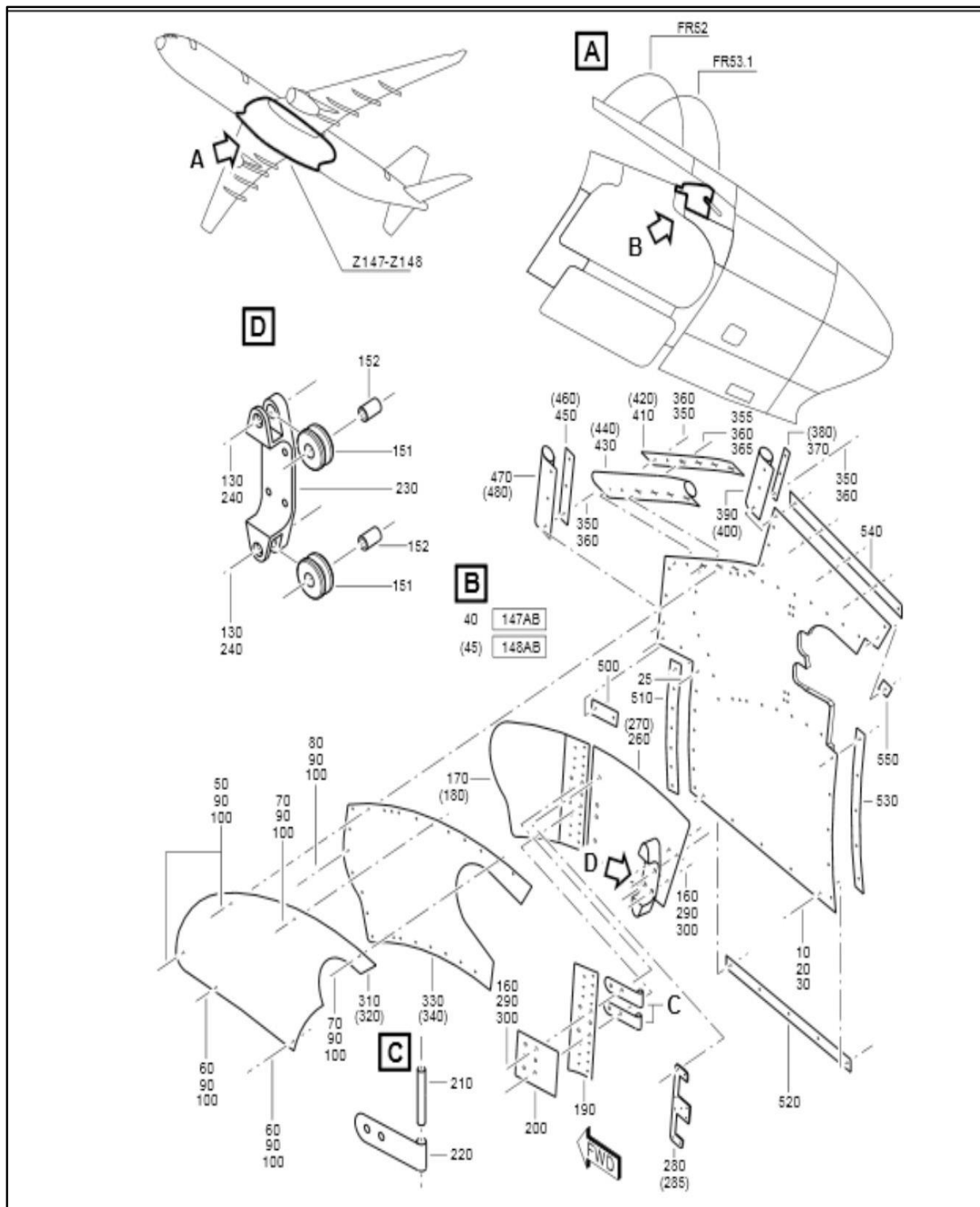
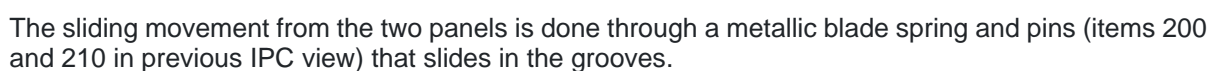


Figure 4: View from IPC 53-35-03-54A



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Figure 6: View from manufacturing with additional springs and pins

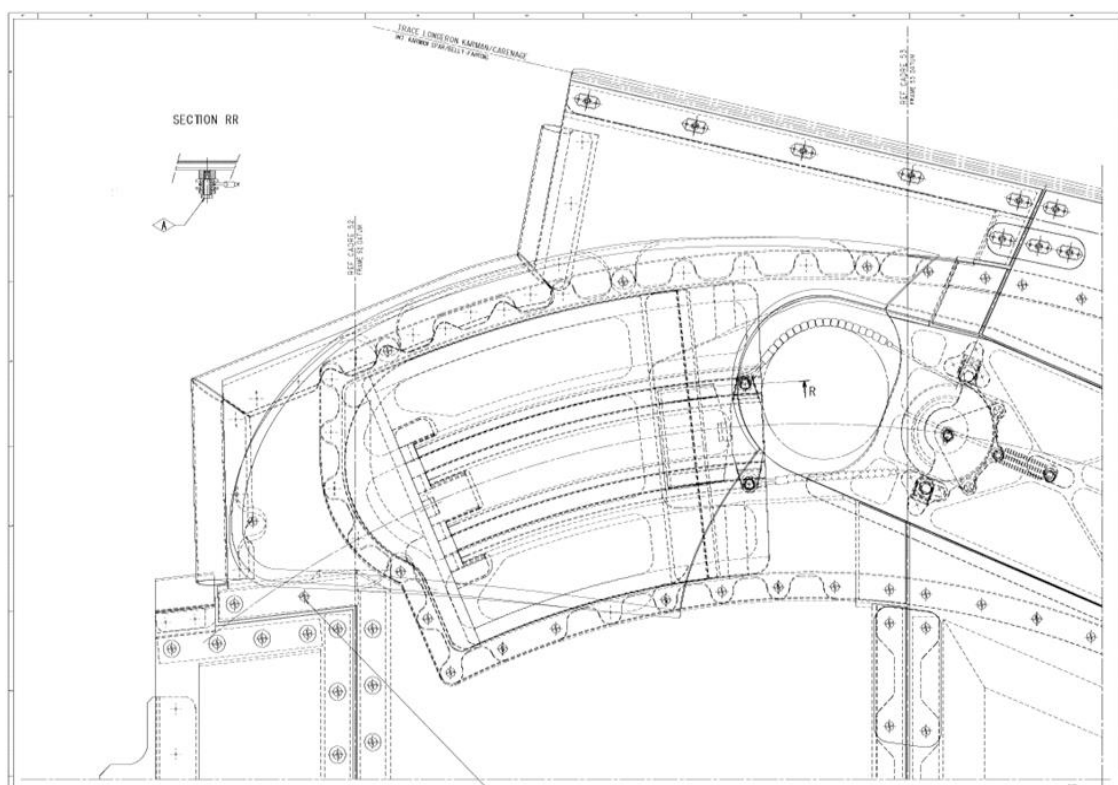


Figure 7: View from drawing on flap retracted position –both panels being superimposed

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Findings

During aircraft inspection, sliding panels have been found torn.



Figure 8: Torn panel

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The root cause analysis led to the details below:

1. The sliding panels have been dislodge from its grooves, when the flap was in full extend position.



Figure 9: Sliding panel dislodged from Belly Fairing panel after extraction

2. When the flap retracts from one to zero, the aft sliding panel (item 270 in IPC description) was unable to move further. The aft sliding panel starts to compress the panel assembly. Finally, this panel assembly cracked and hit left hand torque tube in the wheel well area.

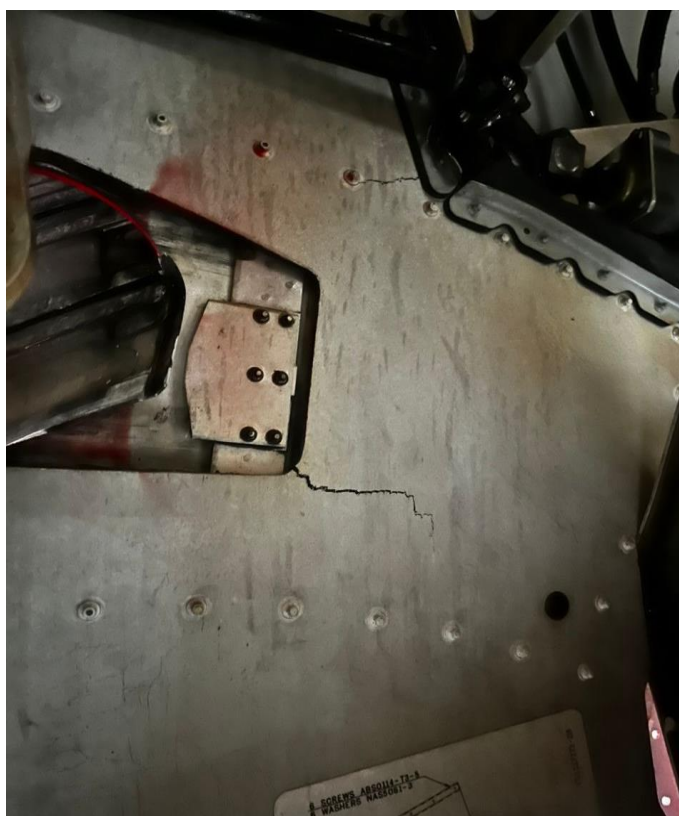


Figure 10: Aft sliding panel compress panel assembly. Evidence of crack found

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Figure 11: Panel assembly cracked and hit left hand torque tube in the wheel well area

Additional Note

In case of damage found on the sliding panel, the aircraft can be operated without the panel as per MCDL-53 02 and shall be replaced at the earliest opportunity

Summary:

This MSB is to create awareness on the operation of the sliding panels in relation to the flap movement. Awareness on the spring serviceability and the pin are not blocked inside the panel. Furthermore, it is good practice to ensure panel groove is also free of FOD and the panel is not dislodged.

Please be guided accordingly.

(Issued/Signed)

AHMAD EZANEE OMAR
HEAD QUALITY ASSURANCE

(No signature is necessary if issued via e-mail / posted in bulletin board/E-Learning)