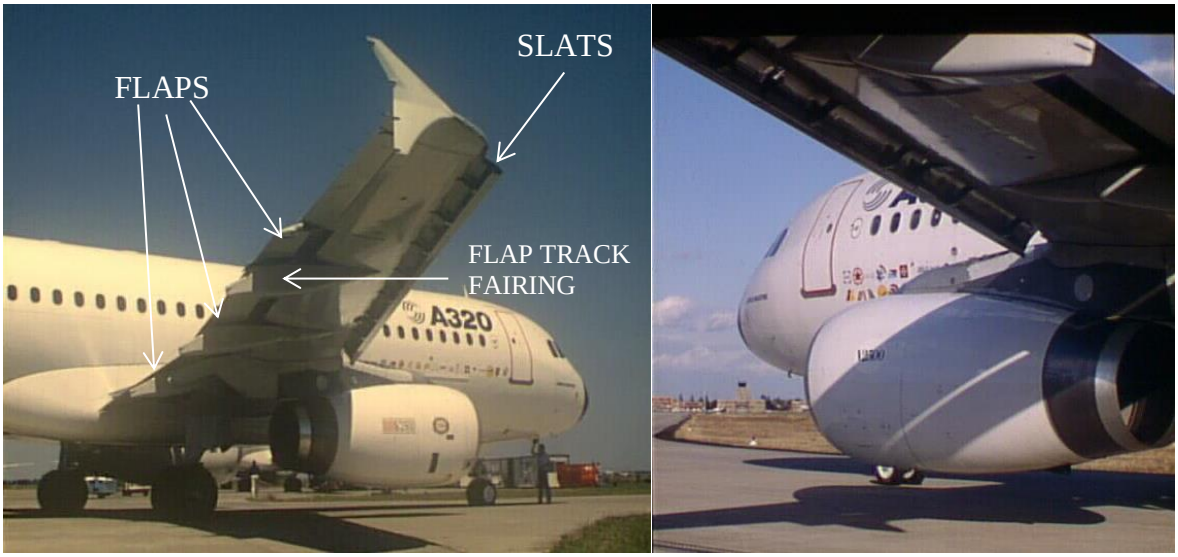
Bulletin 78 **Jul 2015**

Underwing Fuelling of Airbus A320 Family Aircraft

Purpose

There have been a number of incidents and near misses in recent years involving contact between the fuelling vehicle and the flaps or flap track fairings of Airbus A320 family aircraft (A318, A319, A320 & A321). The purpose of this Bulletin is to provide information on the reasons for the incidents and to put in place controls to prevent recurrence.



Background

Airbus aircraft are fitted with an overheat protection system to protect the structure from elevated temperatures. A heat detection system in the leading edge of the wing triggers an alarm to the flight crew to warn of a leak from the air bleed system used to supply the aircraft ECS (Environmental Control System).

On the ground, in high ambient temperature conditions, this alarm can be triggered spuriously. To stop the alarm from sounding in the cockpit the flight crew extend the slats to allow air to flow around the heat detection loop. However, at low speed or standstill, extending the slats results in the automatic extension and lowering of the flaps. This is a safety device set to operate at a pre-determined airspeed to avoid in-flight stalls.

With the flaps extended there is reduced ground clearance under the flaps, and more importantly under the flap track fairings, which are significantly lower than the flaps themselves (as shown in the picture above).

This has resulted in incidents and near misses involving A320 family aircraft, and particularly with the A321, whose flap track fairings are larger and, when deployed, are significantly lower than those of A318, A319, or A320 aircraft. However, the risk of impact exists for all A320 family aircraft due to the reduced ground clearance under the flaps when extended.

Although the aircraft crew and ground crew are required by Airbus written procedures to make a visual check to ensure that there are no servicing vehicles in operation underwing before extending the slats, there have been incidents and near misses resulting from movement of the aircraft flaps during fuelling operations.

Actions for Into-plane Servicing Operations

In the event that the aircraft crew extend the flaps during fuelling operations without warning, and where the fuelling vehicle is positioned underwing, the Operator shall immediately stop fuelling and shall:

1) contact the aircraft ground staff to inform them that the fuelling has been suspended for safety reasons, and
2) inform the aircraft ground staff that the fuelling vehicle cannot be moved until the flaps have been retracted and the aircraft crew give the 'all clear'.

Fuelling operations may continue when the flaps have been retracted and the aircraft crew confirm that they are aware of the position of the fuelling vehicle.

Fuelling procedures should avoid the need for fuelling vehicles to be positioned underwing of Airbus A318/A319/ A320/A321 series aircraft with the flaps extended. However, where underwing fuelling with the flaps extended is unavoidable because of aircraft operating procedures that require the flaps to be extended in high ambient temperature conditions, and where local fuel supplier and airline procedures permit this, the fuelling vehicle may be marshalled into position under the direction of airline staff or by a competent guide person authorised by the airline. When positioning underwing, the guide person shall ensure that there is adequate clearance between the aircraft and the fuelling vehicle to allow for aircraft settlement during loading.

Additional Guidance from Airbus

The link to the Airbus website shown below gives access to dimensions for all Airbus aircraft types including clearance to slats and flaps and flap fairings in both retracted and extended positions. Heights of fuelling couplings and panels above ground are also shown.

http://www.airbus.com/support/maintenance-engineering/technical-data/aircraft-characteristics/

Actions to Implement this Bulletin (See Table 1 for Action Type Codes)

Action Description	Action Type
Managers of Into-plane Operations shall ensure that Fuelling Operators are made aware of the content of this Bulletin as soon as possible and no later than the end of September 2015.	**RP**
Managers shall ensure that fuelling procedures at their locations are updated to meet this requirement before the end of December 2015.	**RP**

Table 1 - Bulletin Action Types (Bulletins do not necessarily contain all Action Types)

Action Types	JIG Bulletin Action Type Definition
JS	Change to JIG Standard – to be adopted by JV and/or Operator to continue to meet the JIG Standard(s) (JIG 1, 2, 3, 4) **(**)**.
RP	JIG Recommended Practice which the JV should consider adopting as its own practice **(**)**.
I	Issued for information purposes only.
Note **(**)** - If the JV agreements require any of the JIG Standards and/or any of the JIG Common Processes as the governing operational standard then adoption of changes to applicable JIG Standards and/or Common Processes should not be considered optional by the JV Board.	