

## **FAAM rules on delivering, handling and loading/unloading WAS cases**

### **Introduction**

Before attempting to move WAS cases in FAAM's laboratory, store room, Hangar1 or at a Fixed Base Operator (FBO) during detachment, all users must be fully aware of the associated hazards and read/acknowledge these rules, and sign the relevant FAAM safety induction form.

These rules apply upon receiving WAS cases for temporary storage, and loading/unloading cases from a vehicle and the aircraft rear cargo hold.

It is the responsibility of WAS users to provide two staff for handling WAS cases. FAAM and AVALON staff will assist on a best endeavours basis, but are not responsible for ensuring the correct loading of cases.

Users should notify FAAM/AVALON/DirectFlight of their intention to fill WAS cases (case numbers) at least 24 hours prior to take-off, so the aircraft weight and balance can be calculated. Users should fit WAS cases on the aircraft at least 2 hours prior to take-off, so AVALON can sign off its paperwork. Principal Investigators must understand that if WAS cases are not fitted within 2 hours of take-off, cases may be turned back, or take-off may be delayed. This time limitation has been clearly acknowledged in the past, as specified in the WAS pre-flight Standard Operating Procedure (currently version 7), and will be enforced.

### **Delivering WAS cases to FAAM**

FAAM must be notified of an expected delivery at least 24 hour in advance. The online form to request access to the aircraft should be completed (<http://axll.pythonanywhere.com/visit/add/>) for this purpose.

Delivery of WAS cases is expected in FAAM's laboratory (building 85/Hangar 1) between 8am and 5pm, at least one day prior to the science flight, so WAS cases can be inspected, loaded/unloaded in the Hangar.

WAS cases cannot be stored at FAAM for extended period of time. After analysis, WAS cases must be returned to NCAS/AMF (contact Jim Hopkins, University of York), who have overall responsibility for WAS cases servicing and maintenance. Prolonged storage of WAS cases at FAAM must be discussed with FAAM's Instrumentation Manager (Jamie Trembath).

In some exceptional circumstances (eg delayed user analysis/return), WAS cases may be delivered directly to Apron 2 in front of FAAM offices (Building 125) on the day of flying, the usual location for pre-flights; remember to wear a high-visibility vest and refrain from using mobile phones while on the apron. Please notify a FAAM Operations team member if you intend to deliver WAS cases on the day of flying, so Apron access (airside double-gates) can be granted during pre-flight. Empty transport crates will need to be kept in the delivery vehicle during the flight, or moved to FAAM's laboratory to be stored there or in Hangar 1. Again, users are expected to provide sufficient manpower for this task - see above-mentioned minimum two user staff.

### Handling WAS cases

Below is a table summarising the weights of individual WAS cases, and dimensions of WAS case transport crates.

	Weight with transport crate (Kg)	Weight of case alone (Kg)	Length (cm)	Width (cm)	Height (cm)
<b>WAS Case 1</b>	46.8	27.2	89	51	43
<b>WAS Case 2</b>	46.8	27.2	89	51	43
<b>WAS Case 3</b>	46.8	27.2	89	51	43
<b>WAS Case 4</b>	46.8	27.2	89	51	43
<b>WAS Case 5</b>	46.8	27.2	89	51	43
<b>WAS Case 6</b>	51.1	30.4	70	70	43
<b>WAS Case 7</b>	78.7	51.3	108	70	43
<b>Total</b>	363.8	217.7			

All staff handling WAS cases must wear appropriate PPE, namely steel-toe capped shoes and gloves. Case 7 in particular may require more than two staff to be moved, depending on staff's strength.

### Moving WAS cases between vehicle and Hangar/aircraft

WAS users are responsible for this task.

Crated WAS cases must be moved preferably on a transport truck/trolley/dolly through FAAM laboratory into Hangar 1. A member of FAAM will grant you access if your blue-bordered Cranfield Airport pass does not give you access to FAAM laboratories. Once in Hangar 1, the correct route is to turn right out of the labs and follow the purple route around the outside of the hangar, at the back keep within the coned area until you are in the footprint of the aircraft.

FAAM and its visitors have permission to drive airside (onto the apron) at Cranfield using hire, lease, pool vehicles which aren't HGV (under the Met Office's £50m insurance policy). Visitors MUST be supervised and /or escorted by a member of AVALON staff at all times while driving airside to load/unload cases near the aircraft. AVALON staff will notify the Cranfield Airport Air Traffic Control tower of the intended vehicle movements on the apron on your behalf.

During detachments, users must seek DirectFlight or the FBO authorization for apron access.

### **Loading/Unloading the rear cargo hold**

A minimum of three staff are required for loading/unloading WAS cases in the rear cargo hold, as specifically mentioned in FAAM's Risk Assessment "WAS Case Loading and Unloading". The requirement breakdown is as follows: one staff in the hold, two staff handling un-crated WAS cases through the rear cargo door opening. Any staff involved in this activity must read the risk assessment highlighting hazards associated with working in the rear cargo hold confined environment.

The member of staff handling WAS cases inside the rear cargo must ensure all his/her pockets are empty before entering the hold. This is to prevent FOD (Foreign Object Debris/Damage) potentially falling off unnoticed into the hold.

When loading/unloading WAS cases on the apron with the aircraft Auxiliary Power Unit or Ground Conditioning unit, staff are required to wear ear defenders (provided by FAAM).

### **WAS cases sharing and expectations from users**

WAS cases may or may not be required on science missions. The FAAM aircraft is shared between different users, and therefore we expect the following commitments.

After filling WAS cases during a flight, the user is expected to remove WAS cases and notify FAAM/AVALON so paperwork can be updated. Unfilled cases may be retained in the hold if a user is expected to fly on the next mission.

If WAS cases are not filled (system failure/aborted mission), and WAS cases are not required for following missions, the user must remove unused cases.

### **Contacts list**

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