



Ministry
of Defence



Defence Fire and Rescue

Tactics, Techniques & Procedures

Tactics, Techniques & Procedures

Document No:	ATTP-A54
Title:	CAT-06-Upgrade-A400M-RAF-Odiham-1MPRV-1HRET
Date Issued:	13 10 2022
Supersedes:	N/A
Review Date:	01 04 2024
Stakeholders:	DFR HQ ✓ Capita Fire and Rescue ✓ RN Aircraft Handler ✓ RAF Fire and Rescue ✓ DFRS LEC ✓ Other FRS Providers ✓ DFRS (Retained Officers) DFRS (USVF)

Technical Approved	DFR HQ & CFR Operations Committee
--------------------	--------------------------------------

Sponsor Details:	Alex Clark Capita Fire & Rescue (CFR) HQ Reading Bridge House 1 st Floor George Street Reading RG1 8PJ
------------------	--

Contact:	philip.mcguinness@capita.com
----------	--

Conditions of Release

1. This information is Crown Copyright and the intellectual property rights for this publication belong exclusively to the Ministry of Defence (MOD). No material or information contained in this publication should be reproduced, stored in a retrieval system or transmitted in any form outside MOD establishments except as authorised by both the sponsor and the MOD where appropriate.
2. This information is released by the United Kingdom Government to a recipient Government for defence purposes only. It may be disclosed only within the Defence Department of a recipient Government, except as otherwise authorised by the MOD.
3. This information may be subject to privately owned rights.

VERSION CONTROL HISTORY

Version	Amendment	Brief Details	Amended By	Date
V1.0	Draft	New Document	FS C Freeborn	05 Oct 2022
V1.0	Issue	New format	Phil McGuinness	13 Oct 2022

TACTICS TECHNIQUES PROCEDURES

RAF Odiham



A400m Atlas ICA06 RHP

MPRV 4 x 4 (Crash 1)

JNCO
AS 1 ERD
AS 1/2

HRET (Crash 2)

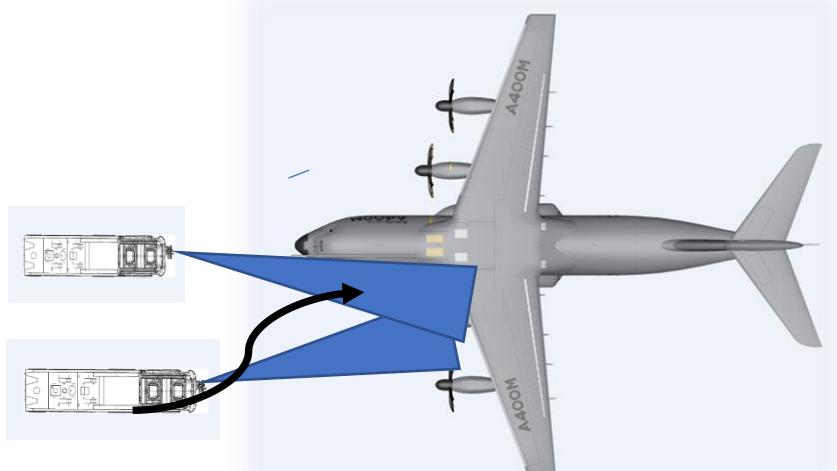
SNCO I/C
AS 1 ERD
AS 1/2

Subject	Page
Version History	Page 2
TTP 1 - Engine Fire	Page 3
TTP 2 – Wheel Assembly Incidents	Page 7
TTP 3 – Internal Fire	Page 10
TTP 4 – External Fire	Page 13

TTP 1 – Engine Fire

Event Plan - Initial Deployment:

WD



Incident Commander Considerations:

- Confirm location and consider viable route
- Conduct and complete DRA
- Declare Tactical Mode
- Consider required agencies and resources
- Consider implementing CSMIP
- Direct firefighting and rescue actions
- Consider contacting aircraft commander via ATC or 121.6 if available
- Be aware of PAX exiting aircraft
- Utilisation of Medical response for initial PEMS
- Direct rescue crew
- Direct all operational control and implement ICS
- Provide M/ETHANE report
- Communicate Hazards to all crews and agencies
- Maintain safe operations and ensure scene safety
- Direct other agencies
- Consider water consolidation/replenishment
- Consider aircraft role (cargo, passenger carrying etc)
- Consider Dangerous Goods
- Maintain contact with ATC and relevant agencies throughout
- Instigate JESIP for multi-agency incident.

Crash 1 - MPRV 4 x 4 Actions:

- Deploy vehicle to fireside side of aircraft, prepare to move to non-fire side if rescue task required
- Be aware of self-extricating PAX and direct them away from the aircraft.
- Be prepared to operate monitor for mass discharge to protect aircrew / pax occupied portion of aircraft.
- Select appropriate media and extinguish fire utilising mass discharge
- Consider method of entry if PAX remain on board
- Don BA and utilize Rapid Deployment Procedures/ stage 1 as required
- Consider use of TIC
- Deploy sufficient lengths of 45mm hose for internal/external firefighting and prepare for entry into aircraft
- BA team access aircraft and create survivable conditions
- Confirm/make safe aircraft systems and affect rescue
- If no rescue task consideration for cooling airframe
- Consider further media application
- Deliver casualties to casualty handling area for strip medic to triage and assist with treatment when able

Crash 2 - HRET Actions

- Deploy vehicle to front of engine fire if possible, taking into consideration wind direction, gradient, passengers and other ARFF vehicle positions
- Operate monitor and extinguish fire utilising mass discharge ensuring full protection is given to pax / crew occupied area of aircraft.
- WM commences DRA
- Deploy HRET (mid-attack position) as guard branch.
- Consider use of FLIR to check for hot spots
- Consider Hydrochem from HRET
- Cool the airframe if required to prevent reignition.
- Redeploy as required.
- HRET Operator to maintain contact with I/C.

Specific Aircraft Hazards - (Make use of AQRC):

- Propellers
- Flammable/pressurised liquids
- Pressurised gases
- Radar systems and high electromagnetic radiation
- Explosive material
- Radioactive material
- Polymer composites
- Engine intakes, exhaust
- LOX
- Countermeasures
- Dangerous Goods (DG)

Further Considerations:

- Aircraft position and wreckage
- Leaking fuel
- Passengers
- Other agencies
- Environmental conditions
- Water supplies
- Lighting

Supporting Information:

- NOG
- CFR Ops Instruction 001 – Aircraft Incidents
- CFR Ops Instruction 002 – CFR HSE Policy
- CFR Ops Instruction 005 – Low Speed Manoeuvring
- CFR Ops Instruction 006 – MPRV ARFF Positioning Deployment & Task
- CFR Ops Instruction 007 – MPRV Vehicle Operations
- CFR Ops Instruction 009 – Oshkosh Striker HRET Positioning Deployment & Task
- CFR Ops Instruction 010 – Oshkosh Striker HRET Incident Commander Considerations.
- CFR Ops Instruction 012 – Oshkosh Striker HRET Controls
- CFR Ops Instruction 013 – Oshkosh Striker HRET Manual recovery
- CFR Ops Instruction 014 – Oshkosh Striker HRET Safety Considerations
- CFR Ops Instruction 016 – Oshkosh Striker HRET Operator Considerations
- CFR Ops Instruction 033 – BA Operations

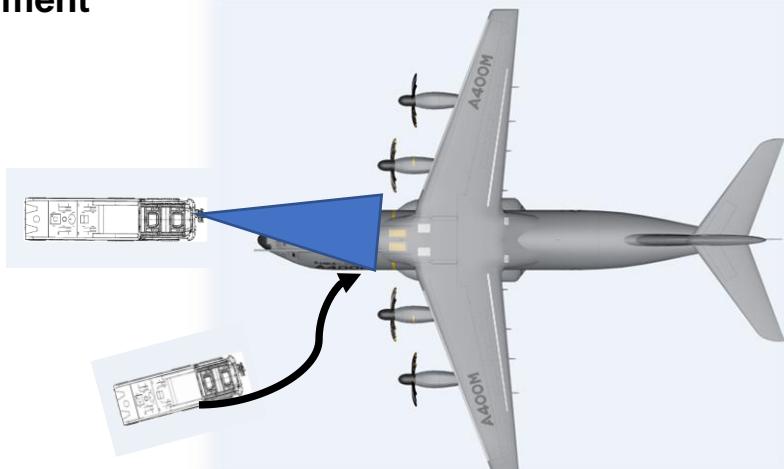
- CFR Op Guidance 003 – Aircraft Fuel Fires
- CFR Op Guidance 007 – Aircraft Engine Fires
- CFR Op Guidance 009 – Incidents Involving Large Aircraft
- MOD Aircraft Crash Hazards Document Set
- NATO STANAG/TO 00-105E-9-Chapter 13 (revision 16)
- AQRC A01

Training:

- Aircraft familiarisation – Use of Crew / Sqn pers
- CT Technical Note 63 – Engine Fires
- Endorsed PPT
- Redkite CMS.

TTP 2 – Wheel Assembly Incidents

Event Plan - Initial Deployment



Incident Commander Considerations:

- Confirm location and consider viable route
- Conduct and complete DRA
- Declare Tactical Mode
- Consider required agencies and resources
- Consider implementing CSMIP
- Direct firefighting and rescue actions
- Consider contacting aircraft commander via ATC or 121.6 if available
- Be aware of PAX exiting aircraft
- Utilisation of Medical response for initial PEMS
- Direct rescue crew
- Direct all operational control and implement ICS
- Provide M/ETHANE report
- Communicate Hazards to all crews and agencies
- Maintain safe operations and ensure scene safety
- Direct other agencies
- Consider water consolidation/replenishment
- Consider aircraft role (cargo, passenger carrying etc)
- Consider Dangerous Goods
- Maintain contact with ATC and relevant agencies throughout
- Instigate JESIP for multi-agency incident.

Crash 1 - MPRV 4 x 4 Actions:

- Deploy vehicle to rescue side of aircraft Be aware of PAX exiting the aircraft
- Be aware of PAX exiting the aircraft
- Direct personnel away from airframe to medics
- Be prepared to operate monitor for mass discharge
- Consider method of entry if PAX remain on board
- Consider use of BA and utilize Rapid Deployment Procedures/ stage 1 as required
- Deploy sufficient lengths of 45mm hose for entry into the aircraft.
- BA team access aircraft and create survivable conditions
- Consider use of TIC
- Confirm/make safe aircraft systems
- Utilise medics to triage casualties on board if survivable conditions have been made and aircraft is stable.

- Aid medics in extricating casualties
- Maintain contact with IC.

Crash 2 – HRET Actions:

- Deploy vehicle to the front affected side of aircraft remaining within safety zone. Consider wind direction, gradient, passengers and other ARFF vehicle positions
- WM commences DRA
- Select firefighting media dependant on WM DRA on affected assembly.
- Deploy main monitor and be prepared to extinguish fire utilising mass discharge (if required)
- Deploy HRET (low-attack position)
- Consider use of FLIR to check for hot spots
- Consider use of secondary agent
- Consider further media application
- Provide scene safety
- Re-deploy HRET as required
- HRET operator to maintain comms with I/C
- WM instigate ICS and sectorise incident as required
- At appropriate time IC relocates to ICP
- Direct all operational control and implement ICS

Specific Aircraft Hazards - (Make use of AQRC):

- Flammable/pressurised liquids
- Pressurised gases
- Radar systems and high electromagnetic radiation
- Explosive material
- Radioactive material
- Polymer composites.
- Engine intakes, exhaust
- LOX
- Countermeasures
- Dangerous Goods (DG)

Further Considerations:

- Aircraft position and wreckage
- Leaking fuel
- Pax and crew
- Other agencies
- Wheel assembly collapse
- Lighting
- Environmental conditions
- The actions during this incident will be dependent on the following conditions:
 1. Is the wheel assembly on fire?
 2. Is the fire confined to one area or is escalation likely?
 3. Is there damage to other areas of the fuselage due to heavy landing?

Supporting Information:

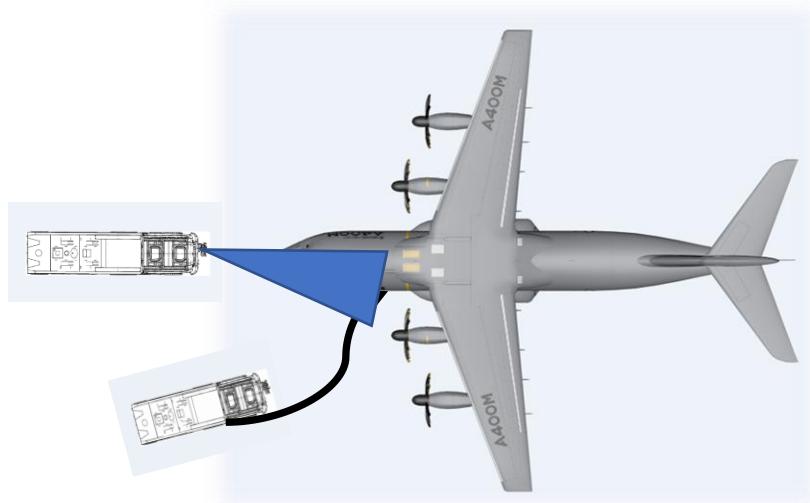
- NOG
- CFR Ops Instruction 001 – Aircraft Incidents
- CFR Ops Instruction 002 – CFR HSE Policy
- CFR Ops Instruction 005 – Low Speed Manoeuvring
- CFR Ops Instruction 006 – MPRV ARFF Positioning Deployment & Task
- CFR Ops Instruction 007 – MPRV Vehicle Operations
- CFR Ops Instruction 009 – Oshkosh Striker HRET Positioning Deployment & Task
- CFR Ops Instruction 010 – Oshkosh Striker HRET Incident Commander Considerations.
- CFR Ops Instruction 012 – Oshkosh Striker HRET Controls
- CFR Ops Instruction 013 – Oshkosh Striker HRET Manual recovery
- CFR Ops Instruction 014 – Oshkosh Striker HRET Safety Considerations
- CFR Ops Instruction 016 – Oshkosh Striker HRET Operator Considerations
- CFR Ops Instruction 033 – BA Operations
- CFR Op Guidance 003 – Aircraft Fuel Fires
- CFR Op Guidance 007 – Aircraft Engine Fires
- CFR Op Guidance 009 – Incidents Involving Large Aircraft
- MOD Aircraft Crash Hazards Document Set
- NATO STANAG/TO 00-105E-9-Chapter 13 (revision 16)
- AQRC A01

Training:

- Aircraft familiarisation – Use of Crew / Sqn personnel
- Deployment exercise(s)
- Aircraft lecture – 6 monthly lesson / familiarisation presentation
- Redkite CMS.

TTP 3 – Internal Fire

Event Plan - Initial Deployment



Incident Commander Considerations:

- Confirm location and consider viable route
- Provide M/ETHANE report
- Consider required agencies and resources
- Consider implementing CSMIIP
- Conduct and complete DRA
- Declare Tactical Mode
- Consider contacting aircraft commander via ATC or 121.6 if available
- Be aware of PAX exiting aircraft
- Utilisation of Medical response for initial PEMS
- Direct firefighting and rescue actions
- Direct all operational control and implement ICS
- Consider deployment of ASPN
- Communicate hazards to all crews and agencies
- Maintain safe operations and ensure scene safety
- Direct other agencies
- Consider water consolidation/replenishment
- Consider aircraft role (Cargo, passenger carrying etc)
- Consider Dangerous Goods
- Maintain contact with ATC and relevant agencies throughout
- Instigate JESIP for multi-agency incident.

Crash 1 - MPRV 4 x 4 Actions

- Deploy vehicle to rescue side of aircraft consider best entry point to aircraft based on incident information
- Consider method of entry if PAX remain on board
- Be aware of PAX exiting the aircraft
- Protect escape routes from fire
- Don BA and utilize Rapid Deployment Procedures/ stage 1 as required
- Deploy sufficient lengths of 45mm hose and secondary agent, and prepare for entry into aircraft
- BA team enter aircraft locate and extinguish fire, create survivable conditions
- Confirm/make safe aircraft systems
- Remove any casualties from immediate danger If possible
- Utilise medics to triage casualties on board if survivable conditions are present
- Aid medics in extricating casualties
- Maintain contact with IC

Crash 2 - HRET Actions:

- Deploy vehicle centrally to the aircraft. Consider wind direction, gradient, passengers and other ARFF vehicle positions
- Deploy HRET mid to high attack position as a guard branch.
- Identify location of fire utilising FLIR capability
- Consider deployment of ASPN
- Consider water relay to MPRV crew
- Consider deploying 45 mm safety line
- Provide scene safety to front portion of aircraft where pax / crew are located.
- Redeploy if required
- Driver / HRET Operator to Maintain contact with IC.
- WM commences DRA
- WM to maintain contact with BA Team.
- WM instigate ICS and sectorise incident as required
- At appropriate time IC relocates to ICP
- Direct all operational control and implement ICS
- Direct other agencies
- Consider water consolidation/replenishment
- Consider aircraft role (Cargo, passenger carrying etc)
- Consider Dangerous Goods
- Maintain contact with ATC and relevant agencies throughout
- Instigate JESIP for multi-agency incident.

Specific Aircraft Hazards/Procedures:

- Propellers
- Flammable/pressurised liquids
- Pressurised gases
- Radar systems and high electromagnetic radiation
- Explosive material
- Radioactive material
- Polymer composites.
- Countermeasures
- Dangerous Goods (DG)

Further Considerations:

- Aircraft position and wreckage
- Leaking fuel
- APU
- Pax and Crew
- Other agencies
- Internal lighting
- Ventilation
- Environmental conditions

Supporting Information:

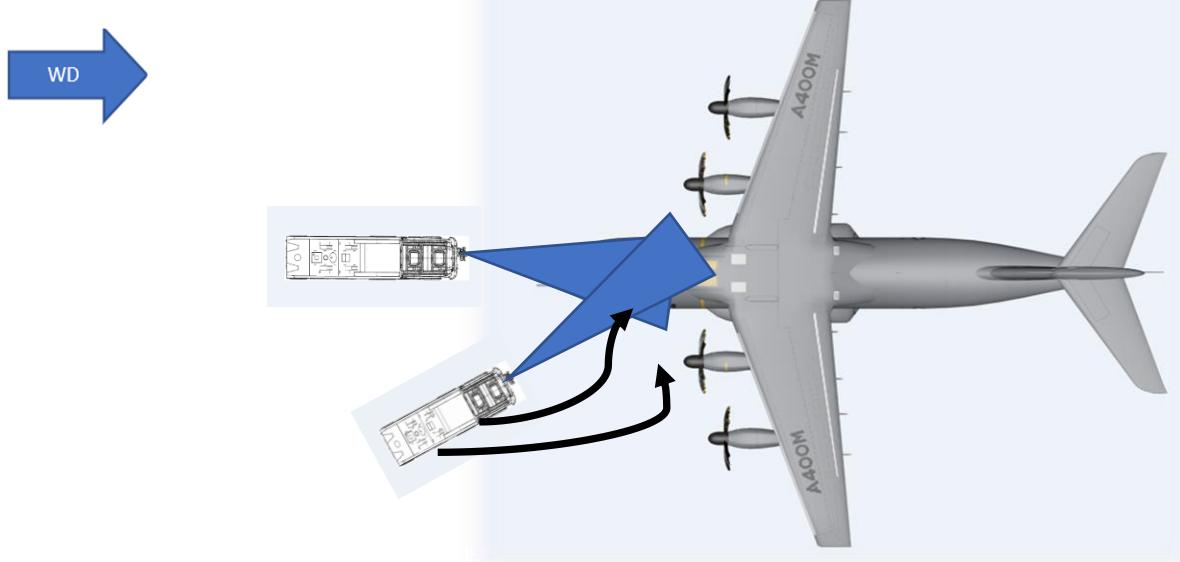
- NOG
- CFR Ops Instruction 001 – Aircraft Incidents
- CFR Ops Instruction 002 – CFR HSE Policy
- CFR Ops Instruction 005 – Low Speed Manoeuvring
- CFR Ops Instruction 006 – MPRV ARFF Positioning Deployment & Task
- CFR Ops Instruction 007 – MPRV Vehicle Operations
- CFR Ops Instruction 009 – Oshkosh Striker HRET Positioning Deployment & Task
- CFR Ops Instruction 010 – Oshkosh Striker HRET Incident Commander Considerations
- CFR Ops Instruction 011 – Oshkosh Striker HRET Aircraft Piercing
- CFR Ops Instruction 012 – Oshkosh Striker HRET Controls
- CFR Ops Instruction 013 – Oshkosh Striker HRET Manual recovery
- CFR Ops Instruction 014 – Oshkosh Striker HRET Safety Considerations
- CFR Ops Instruction 016 – Oshkosh Striker HRET Operator Consideration
- CFR Ops Instruction 033 – BA Operations
- CFR Op Guidance 003 – Aircraft Fuel Fires
- CFR Op Guidance 006 – Aircraft Internal Fires
- CFR Op Guidance 009 – Incidents Involving Large Aircraft
- MOD Aircraft Crash Hazards Document Set
- AQRC A01

Training:

- Aircraft familiarisation – Use of Crew / Sqn personnel
- Deployment exercise(s)
- Aircrew extraction / lift out training
- Aircraft lecture – 6 monthly lesson / familiarisation presentation
- Redkite CMS.

TTP 4 – External Fire

Event Plan – Initial Deployment



Incident Commander Considerations:

- Confirm location and consider viable route
- Provide M/ETHANE report
- Consider required agencies and resources
- Consider implementing CSMIIP
- Conduct and complete DRA
- Declare Tactical Mode
- Consider contacting aircraft commander via ATC or 121.6 if available
- Be aware of PAX exiting aircraft
- Utilisation of Medical response for initial PEMS.
- Direct firefighting and rescue actions
- Direct all operational control and implement ICS
- Consider deployment of ASPN
- Communicate hazards to all crews and agencies
- Maintain safe operations and ensure scene safety
- Direct other agencies
- Consider water consolidation/replenishment
- Consider aircraft role (Cargo, passenger carrying etc)
- Consider Dangerous Goods
- Maintain contact with ATC and relevant agencies throughout
- Instigate JESIP for multi-agency incident.

Crash 1 - MPRV 4 x 4 Actions:

- Deploy vehicle to rescue side of aircraft consider best entry point to aircraft based on incident information
- Be aware of PAX exiting the aircraft
- Be prepared to operate the monitor for mass discharge
- Consider method of entry if PAX remain on board
- Protect escape routes from fire
- Don BA and utilize Rapid Deployment Procedures / stage 1 as required
- Deploy sufficient lengths of 45mm hose lines
- Make access to aircraft with 45mm hose and create survivable conditions by extinguishing fire & ventilating
- Extended lines of 45mm Hose to cover external rescue side of aircraft
- Confirm/make safe aircraft systems
- Remove any casualties from immediate danger If possible
- Utilise medics to triage casualties on board if survivable conditions have been made
- Aid medics in extricating casualties.
- Maintain contact with IC

CRASH 2 – HRET Actions:

- Deploy vehicle centrally to the aircraft. Consider wind direction, gradient, passengers and other ARFF vehicle positions
- Deploy HRET mid to high attack position as a guard branch
- Identify location of fire utilising FLIR capability
- Consider deployment of ASPN
- Consider water relay to MPRV crew
- Consider deploying 45 mm safety line
- Provide scene safety
- Redeploy as required to cool hot spots
- DVR / HRET Operator to Maintain contact with IC.

Specific Aircraft Hazards/Procedures:

- Propellers
- Flammable/pressurised liquids
- Pressurised gases
- Radar systems and high electromagnetic radiation
- Explosive material
- Radioactive material
- Polymer composites.
- LOX
- Countermeasures
- Dangerous Goods (DG)

Further Considerations:

- Aircraft position and wreckage
- Leaking fuel
- Passengers
- Other agencies
- Environmental conditions
- Water supplies
- Lighting

Supporting Information:

- NOG
- CFR Ops Instruction 001 – Aircraft Incidents
- CFR Ops Instruction 002 – CFR HSE Policy
- CFR Ops Instruction 005 – Low Speed Manoeuvring
- CFR Ops Instruction 006 – MPRV ARFF Positioning Deployment & Task
- CFR Ops Instruction 007 – MPRV Vehicle Operations
- CFR Ops Instruction 009 – Oshkosh Striker HRET Positioning Deployment & Task
- CFR Ops Instruction 010 – Oshkosh Striker HRET Incident Commander Considerations
- CFR Ops Instruction 011 – Oshkosh Striker HRET Aircraft Piercing
- CFR Ops Instruction 012 – Oshkosh Striker HRET Controls
- CFR Ops Instruction 013 – Oshkosh Striker HRET Manual recovery
- CFR Ops Instruction 014 – Oshkosh Striker HRET Safety Considerations
- CFR Ops Instruction 016 – Oshkosh Striker HRET Operator Consideration
- CFR Ops Instruction 033 – BA Operations
- CFR Op Guidance 003 – Aircraft Fuel Fires
- CFR Op Guidance 006 – Aircraft Internal Fires
- CFR Op Guidance 009 – Incidents Involving Large Aircraft
- MOD Aircraft Crash Hazards Document Set
- AQRC A01

Training:

- Aircraft familiarisation – Use of Crew / Sqn personnel
- Deployment exercise(s)
- Aircraft lecture – 6 monthly lesson / familiarisation presentation
- Redkite CMS.