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Defence Fire and Rescue Tactics Techniques Procedure

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Stakeholders:	<table><tr><td>DFR HQ</td><td>✓ Capita Fire and Rescue</td><td>✓</td></tr><tr><td>RN Aircraft Handler¹</td><td>✓ RAF Fire and Rescue</td><td>✓</td></tr><tr><td>DFRS LEC</td><td>✓ Other FRS Providers²</td><td></td></tr><tr><td>DFRS (DFSR, DIO, RN)³</td><td>✓ DFRS (USVF)</td><td></td></tr></table>	DFR HQ	✓ Capita Fire and Rescue	✓	RN Aircraft Handler ¹	✓ RAF Fire and Rescue	✓	DFRS LEC	✓ Other FRS Providers ²		DFRS (DFSR, DIO, RN) ³	✓ DFRS (USVF)	
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¹ RN (AH) stakeholders are the Operational Responders based at the Culdrose, Predannack, Yeovilton and Merryfield aerodromes

² Other FRS Providers include Babcock, Mitie and QinetiQ Fire Services. In addition, this publication will also be shared with AWE and QinetiQ FRS for information purposes only.

³ For the purposes of this ATTP, DFRS Fire Officers employed within DFRS, DIO & RN, are included for information purposes only.

VERSION CONTROL HISTORY



AIRCRAFT TACTICS TECHNIQUES PROCEDURES ATTP-A35

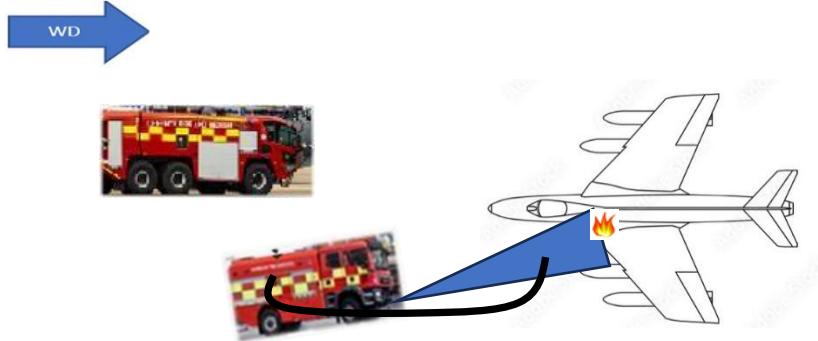
Hawker Hunter

1 x MPRV 1 x Striker (or second MPRV)

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TTP 1 – Engine/External Fire

Event Plan - Initial Deployment



Incident Commander Considerations:

- On arrival complete DRA of incident
 - Location of A/C (condition and gradient)
 - Wind Direction
 - Emergency declared
 - POB (single and twin seater variants)
 - Formulate tactics dependent if fire is present and where escalation is likely
- Declare Tactical Mode to ATC.
- Consider required agencies (Medic, Enviro, Armourer, POL response team, A/C Recovery)
- Consider M/ETHANE, not all fire incidents may be a Major Incident
- Consider implementing Leeming CP1 (contingency plan) through ATC
- Consider contacting aircraft commander via ATC or 121.6 if available
- Direct firefighting actions
- Consider use of secondary media
- Direct rescue crew operations
- Direct all operational control and implement ICS
- Maintain safe operations and ensure scene safety
- Request Local Authority Ambulance if required (M/ETHANE).
- Consider water consolidation/replenishment

Crash 1 - MPRV Actions:

- Deploy MPRV vehicle to dominant engine firefighting position on cockpit access side
- Consider further media application
- If fire present operate main monitor and extinguish fire with mass discharge
- Consider use of secondary media
- Carry out check of area affected by fire to confirm area is safe
- Cool A/C if required.
- Don BA under Rapid Deployment Procedures required, instruction will be given by the IC.
- BA Team will take suitable control measure utilising 45mm hose line and/or secondary media
- Consider method of entry if pilot(s) remain in cockpit
- Deploy ladder
- Make safe aircraft systems
- Assist with medical/trauma response
- Provide scene safety, commence triage, establish casualty handling station, administer first aid.

Crash 2 – MPRV/Striker Actions:

- Deploy striker vehicle to dominant engine firefighting position
- Be aware of PAX (single or twin seater variant) in vicinity of the aircraft
- Operate main monitors and extinguish fire with mass discharge
- Consider Dry Powder / dual agent attack
- Don BA under stage 1 procedures if required
- Assist Crash 1 crew in their tasks where necessary
- Assist with medical/trauma response
- Provide scene safety, Commence triage, establish casualties handling station, administer first aid.

Specific Aircraft Hazards: (Make use of AQRC):

- Aircraft Escape Systems
- Flammable Liquids
- Pressurised Gases
- Radar Safety Distances
- Explosive Material/Flares
- High Pressure Hydraulics.

Further Considerations:

- Aircraft position and wreckage
- Leaking fuel
- Other agencies
- Crash crew trained as First Aid.

Training:

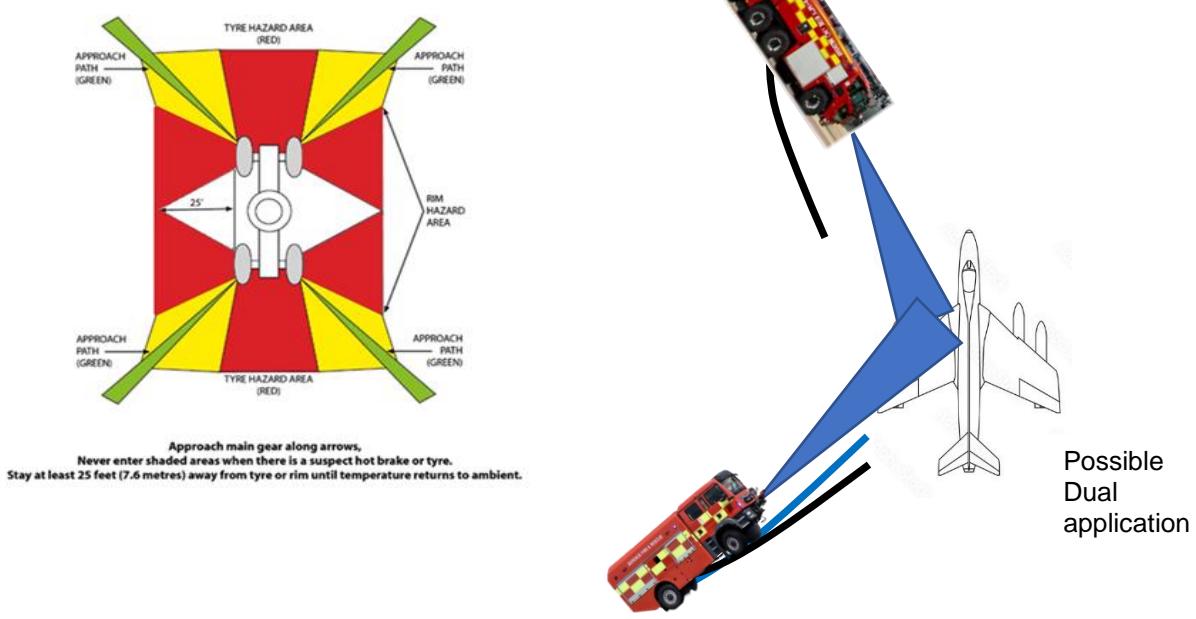
- Aircraft familiarization
- Deployment exercise(s)
- Current MOCs (CT / MOST) implementation
- Aircraft lesson – 6 monthly lesson / familiarization and seat & shutdown training

Supporting Information:

- DFR-OG 009 - Aircraft Fires
- Ops Instruction 001 - Aircraft Incidents
- Ops Instruction 002 - CFR HSE Policy
- Ops Instruction 005 - Low Speed Manoeuvring
- Ops Instruction 006 - MPRV ARFF Positioning Deployment & Task
- Ops Instruction 007 - MPRV Vehicle Operations
- Ops Instruction 009 - Oshkosh Striker HRET Positioning deployment & Task
- Ops Instruction 010 - Oshkosh Striker HRET ICs Considerations
- Ops Instruction 012 - Oshkosh Striker HRET Controls
- Ops Instruction 013 - Oshkosh Striker HRET Manual recovery
- Ops Instruction 014 - Oshkosh Striker HRET Safety Considerations
- Ops Instruction 016 - Oshkosh Striker HRET Operator Considerations
- Ops Instruction 033 - BA Operations
- Ops Instruction 066 - Fire Contaminants
- Ops Instruction 069 - Polymer-Composites-and-MMMF
- Op Guidance 001 - Aircraft Incidents
- Op Guidance 003 - Aircraft Fuel Fires and Foam Application
- Op Guidance 004 – Military Fast Jets
- Op Guidance 007 - Aircraft Engine Fires
- Op Guidance 009 - Incidents Involving Large Aircraft
- MOD Aircraft Crash Hazards Document Set

TTP 2 – Wheel Assembly Incidents

Event Plan - Initial Deployment



Incident Commander Considerations:

- The Crew Commander is to prepare to react to the potential of:
 - Aircraft hot brakes
 - Wheel brake fires
 - Undercarriage collapse
- Correct deployment on aircraft, taking into consideration wind direction
- I/C to book in attendance at incident with ATC controller
- Owing to the potential of a minor incident involving an undercarriage rapidly escalating into a major fire involving the interior and exterior of the aircraft all FRS personnel should consider:
 - Possible spread of fire and heat to fuel tanks and fuselage
 - Evacuating aircrew (single and twin aircraft variants)
 - Danger zones
 - Sudden movement or collapse of the aircraft
 - Rapid and effective intervention is essential if the incident is to be confined to the undercarriage assembly itself, preventing the spread of flame to the aircraft fuselage
 - Always keep away from the disintegration zones, ensuring hoses are run out avoiding these areas as far as possible
- Carry out a dynamic risk assessment, identify hazards, any possible casualties in the vicinity of aircraft which I/C can rescue, evaluate risks and select safe systems of work, declare tactical mode to all personnel and ATC
- Consider implementing Leeming CP1 (contingency plan) through ATC
- Fire and Rescue Service personnel should be dressed in full protective clothing with visors down and those working in the vicinity of an undercarriage should wear respiratory protective equipment and aural protection
- Dry powder should be considered especially where hydraulic oils are on fire. Advantages of dry chemical powders:
 - Envelopes and covers the whole heated surface simultaneously and uniformly
 - Low cooling effect, therefore avoiding thermal shock

- Powder forms a coating where there is oil contamination
- Effective extinguishing agent on hydraulic fluids and lubricants

- The duty fire crew commander will retain command and control of the incident site until relieved by the nominated incident commander
- Liaise with pilot via ATC or 121.6, if available, at earliest opportunity to confirm immediate shut down of engines to reduce escalation of incident and evacuate aircraft safely
- Provide M/ETHANE report (if required)
- Direct other agencies if required
- Maintain contact with ATC and relevant agencies throughout.

Crash 1 - MPRV Actions:

- Deploy vehicle to rescue side of aircraft taking into consideration wind direction, gradient, passengers and other ARFF vehicle positions
- Crash 1 crew are to attempt to deploy on the Port side of the aircraft. Using the Raytek temperature gun, ascertain the temperatures of:
 - Wheel brakes / Wheel Rims
 - Tyres and transference of heat to the undercarriage
- Deploy as appropriate either dry powder extinguishers, crash line, CO2 and/or 45mm hose.
- Prepare to approach the aircraft to chock the front wheel
- Report all findings and temperature readings to the Crew Commander
- Be prepared to operate Monitor
- Don BA and utilise Initial Deployment procedures if required to prevent the incident escalating
- Maintain contact with IC.

Crash 2 - MPRV/Striker Actions

- Deploy vehicle to rescue side of aircraft taking into consideration wind direction, gradient, passengers and other ARFF vehicle positions
- Be prepared to operate monitor
- Prepare to approach the aircraft to chock the front wheel.
- Don BA and utilize Initial Deployment procedures if required to prevent the incident escalating
- Vehicle IC to act as Sector Commander and maintain contact with IC

Note: No entry to cockpit should take place until all external fires are extinguished

Specific Aircraft Hazards - (Make use of AQRC):

- Aircraft Escape Systems
- Wheel Assembly hazard areas are fully in line with wheels or alongside the hub. Ideal entry point 45° taken from where thread meets tyre wall
- Flammable Liquids
- Pressurised Gases
- Radar Safety Distances
- Explosive Material/Flares
- High Pressure Hydraulics.

Further Considerations:

- Access to wheel assembly
- Are handheld CO₂'s sufficient? Will charged handlines be more effective?
- Sqn response/actions
- Undercarriage pins
- If fire penetrates fuselage or the situation escalates, adopt Engine Fire/External Fire TTPs
- Consider redeployment if situation deteriorates.

Training:

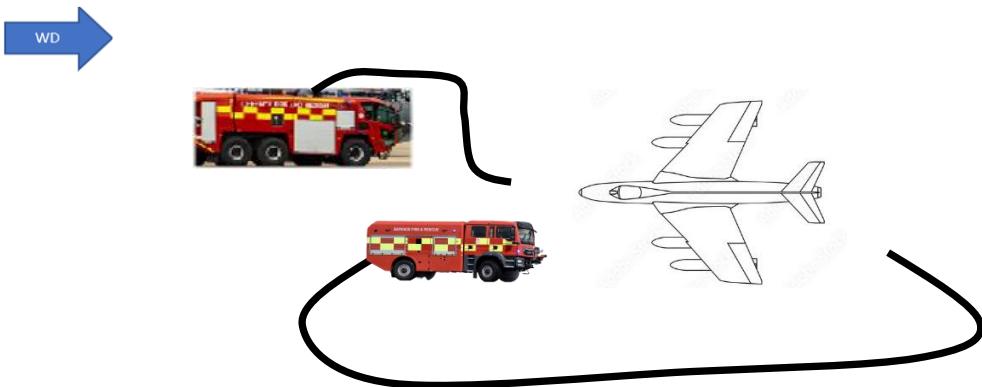
- Aircraft familiarization
- Deployment exercise(s)
- Current MOCs (CT / MOST) implementation
- Aircraft lesson - 6 monthly lesson / familiarization and seat & shutdown training

Supporting Information:

- DFR-OG 009 - Aircraft Fires
- Ops Instruction 001 - Aircraft Incidents
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- Ops Instruction 066 - Fire Contaminants
- Ops Instruction 069 - Polymer-Composites-and-MMMF
- Op Guidance 003 - Aircraft Fuel Fires and Foam Application
- Op Guidance 004 - Military Fast Jets
- Op Guidance 008 - Aircraft Undercarriage Incidents
- MOD Aircraft Crash Hazards Document Set

TTP 3 – Internal fire Incidents

Event Plan - Initial Deployment



Incident Commander Considerations:

- Location of A/C
- Emergency declared
- POB
- Wind Direction
- Transit to incident
- Confirm with all crew's nature of incident and location
- If external fires are present these need dealing with first (Mass discharge?)
- Evacuating POB's (single and twin variants)
- DRA followed by M/ETHANE
- Consider implementing Leeming CP1 (contingency plan) through ATC
- Inform ATC of Tactical Mode & request external resources
- Direct all operational control and implement ICS
- Consider contacting aircraft commander via ATC or 121.6 if available
- Repeat DRA as appropriate to the incident
- Prepare for ARA
- Declare state of airfield and ICAO category
- Consider use of secondary media
- Direct evacuated passengers/crew to a safe holding area
- SENGO/Sqn Support
- LAFRS
- Ensure safe handover of incident when declared safe to relevant authority
- Debrief all crew's post-incident and identify any further support required.

Crash 1 - MPRV Actions:

- Deploy vehicle to rescue side of aircraft taking into consideration wind direction, gradient, passengers and other ARFF vehicle positions
- Crew will assist POBs to designated safe zones, while IC of vehicle considers safest entry point into airframe
- BA Team will prepare to enter cockpit using suitable control measures while driver & IC make available equipment such as short extension ladder and 45mm lay flat hose to be used if required
- Consider secondary media
- BA Team will access the cockpit area to make safe any risks and assist in casualty extraction, a 45m lay flat hose will be available for BA team
- Remove any casualties as appropriate and according to SOP

Crash 2 - MPRV/Striker Actions

- Deploy to the main hazard ensuring the final approach is kept with the safe zone, use monitor to knock down mass flames if required
- Once initial discharge from the bumper monitor has taken effect, the driver will deploy the HRET to the danger area selecting the appropriate media to extinguish the fire. Consider dual media application utilising secondary media available
- Bumper turret may be used to cool fuselage if required. Consider conservation of media used
- Consider use of FLIR to check for hot spots
- When available, vehicle commander will provide situation feedback to Crew commander
- Vehicle commander will provide supporting resources if incident requires BA intervention (emergency covering line in support of BA Team, 45mm lay flat hose to MPRV, ladder access requirements)
- Once fire is extinguished and the aircraft has been made safe, casualties have been extracted and are in medical care, crew commander can look to close-down the incident.

Note: No entry to cockpit should take place until all external fires are extinguished

Specific Aircraft Hazards – (Make use of AQRC):

- Aircraft Escape Systems
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Further Considerations:

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- Leaking fuel
- Other agencies
- Crash crew trained as First Aid.

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