Ministry of Defence

Defence Fire and Rescue Tactics Techniques Procedure

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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 DFSR, DIO & RN, are included for information purposes only.

VERSION CONTROL HISTORY

Version	Date	Amended by	Role	Change	Status
V1.0	21/10/2022	Sgt Patterson	F.S. Trng Mngr		draft
V1.1	22/11/2022	C Freeborn	FSM	Minor Amendments	Final Draft
V1.1	06/01/2023	P McGuinness	Hd of Response		Issued
V1.2	16/10/2024	P McGuinness	Hd of Response	1. New Cover and layout. 2. Change of Sponsor. 3. Combined Engine / External Fire ATTP	For review
V1.2	19/12/2024	C Smith	(Sgt) Fftr RAF Odiham	Station reviewer	Reviewed
V1.2	22/01/2025	Shane Cook	AM for DFR HQ	Stakeholder Review	For issue
V1.2	22/01/2025	P McGuinness	Hd of Response	Re-issued	Re-issued

Defence Fire & Rescue

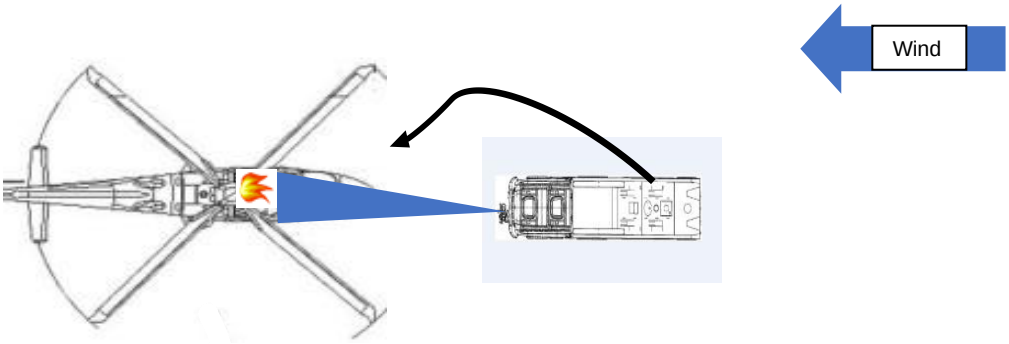
AIRCRAFT TACTICS TECHNIQUES PROCEDURES

1 x MPRV[4]

Version Control	Page 2
TTP 1 - Engine Fire/External Fire	Page 3
TTP 2 - Wheel Assembly Incidents	Page 6
TTP 3 - Internal Fire	Page 9

TTP 1 – Engine/External Fire

Event Plan - Initial Deployment



Incident Commander Considerations:

- Conduct and complete DRA
- Order BA Team to don BA using Rapid Deployment procedures
- Declare Tactical Mode
- Consider required agencies and resources
- Consider implementing Major Incident Plan
- Direct firefighting actions to create survivable conditions
- Consider mass discharge from monitor
- Consider use of secondary media
- Consider contacting aircraft commander via ATC or 121.6 if available
- Be aware of PAX exiting aircraft
- Direct BA rescue crew
- Direct Medical Teams
- Direct all operational control and implement ICS
- Provide M/ETHANE report
- Maintain safe operations and ensure scene safety
- Direct other agencies
- Consider media run-off and water courses on scene.
- Consider preservation of evidence

[4]H1 Response: Consisting of single MPRV (or RRV), c/w a crew of 4.

- Instigate JESIP for multi-agency incident.

Crash 1 - MPRV Actions:

- Deploy vehicle to aircraft nose
- Be aware of PAX and assist them exiting the aircraft
- Direct personnel away from the airframe
- Consider use of monitor to extinguish fire
- Consider use of secondary agents.
- Consider method of entry if PAX remain onboard
- Don BA and instigate Rapid Deployment Procedures if required
- Deploy media with sufficient lengths of 45mm hose/hose reel as determined by IC
- DRA and prepare for entry into aircraft
- BA team access aircraft and create survivable conditions if required
- Confirm/make safe aircraft systems
- Utilise Medics to triage casualties on board if survivable conditions are present
- Aid Medics in extricating casualties
- Consider use of auxiliary equipment such as TIC
- Carry out external airframe cooling as required
- Provide scene safety.
- **No internal entry to airframe should take place until all external fires are extinguished or declared as under control.**

Specific Aircraft Hazards: (Make use of AQRC):

- Rotors
- Flammable liquids
- Flammable/pressurised gases
- Composite aircraft materials

Further Considerations:

- Aircraft position and wreckage
- Leaking fuel
- Aircrew
- Other agencies.

Supporting Information:

- DFR-OG 009 - Aircraft Fires
- Op Instruction 001 - Aircraft Incidents
- Op Instruction 002 - CFR HSE Policy
- Op Instruction 005 - Low Speed Manoeuvring
- Op Instruction 006 - MPRV ARFF Positioning Deployment & Task
- Op Instruction 007 - MPRV Vehicle Operations
- Op Instruction 033 - BA Operations
- Op Instruction 066 - Fire Contaminants
- Op Instruction 069 - Polymer-Composites-and-MMMF
- Op Guidance 001 - Aircraft Incidents
- Op Guidance 002 - Incidents Involving Rotary Wing Aircraft
- Op Guidance 005 - Incidents Involving Small Aircraft

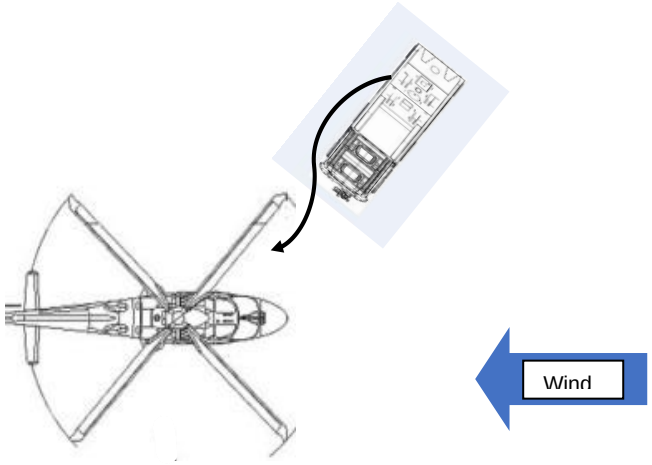
- Op Guidance 007 - Aircraft Engine Fire
- MOD Aircraft Crash Hazards Document Set
- NATO STANAG / TO 00-105E-9-Chapter 13 (revision 16)
- DSA 1000m assessments
- DSA Water assessments
- DSA Response assessments

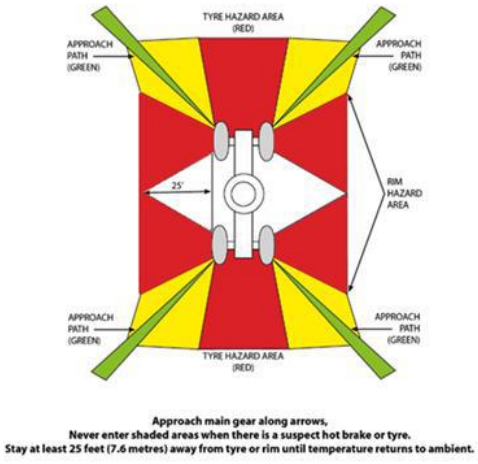
Training:

- Aircraft familiarisation
- Deployment exercise(s)
- Redkite CMS
- Aircraft lecture - 6 monthly lesson / familiarisation presentation

TTP 2 – Wheel Assembly Incidents

Event Plan - Initial Deployment





Approach main gear along arrows,
Never enter shaded areas when there is a suspect hot brake or tyre.
Stay at least 25 feet (7.6 metres) away from tyre or rim until temperature returns to ambient.

Incident Commander Considerations:

- Conduct and complete DRA
- Order BA Team to don BA using Rapid Deployment
- Declare Tactical Mode
- Consider required agencies and resources
- Consider implementing Major Incident Plan
- Direct firefighting actions to create survivable conditions
- Consider mass discharge from monitor
- Consider use of secondary media

- Consider contacting aircraft commander via ATC or 121.6 if available
- Be aware of PAX exiting aircraft
- Direct BA rescue crew
- Direct Medical Teams
- Direct all operational control and implement ICS
- Provide M/ETHANE report
- Maintain safe operations and ensure scene safety
- Direct other agencies
- Consider media run-off and water courses on scene.
- Consider preservation of evidence
- Instigate JESIP for multi-agency incident.

Crash 1 - MPRV Actions:

- Crash 1 to deploy on the relevant affected undercarriage area, taking into consideration wind direction, gradient, and passengers exiting.
- Direct personnel away from the airframe
- Consider use of monitor and extinguish fire
- Consider use of secondary agents
- Consider use of in-situ airfield FAFAs
- Consider method of entry if PAX remain onboard
- Don BA and instigate Rapid Deployment Procedures if required
- Deploy media with sufficient lengths of 45mm hose/hose reel as determined by IC DRA and prepare for entry into aircraft
- BA team access aircraft and create survivable conditions if required
- Confirm/make safe aircraft systems
- Utilise Medics to triage casualties on board if survivable conditions are present
- Aid Medics in extricating casualties
- Consider use of auxiliary equipment such as Raytec
- Carry out external airframe cooling as required.
- Maintain contact with IC
- Provide scene safety.
- **Note: No internal entry to airframe should take place until all external fires are extinguished or declared as under control.**

Specific Aircraft Hazards

- Rotors
- Weapons / Pyrotechnics
- Flammable liquids
- Flammable/pressurised gases
- Composite Materials
- Oleo Leg Collapsing

Further Considerations

- The actions during this incident will be dependent on the following conditions:
  - Is the wheel assembly on fire?
  - Is the fire confined to one area or is escalation likely upon undercarriage collapse
- Dependent on the severity of the fire, crew commander may request use handheld extinguishers
- Aircrew will commence shutting down of A/C systems and self-extract if possible

Training:

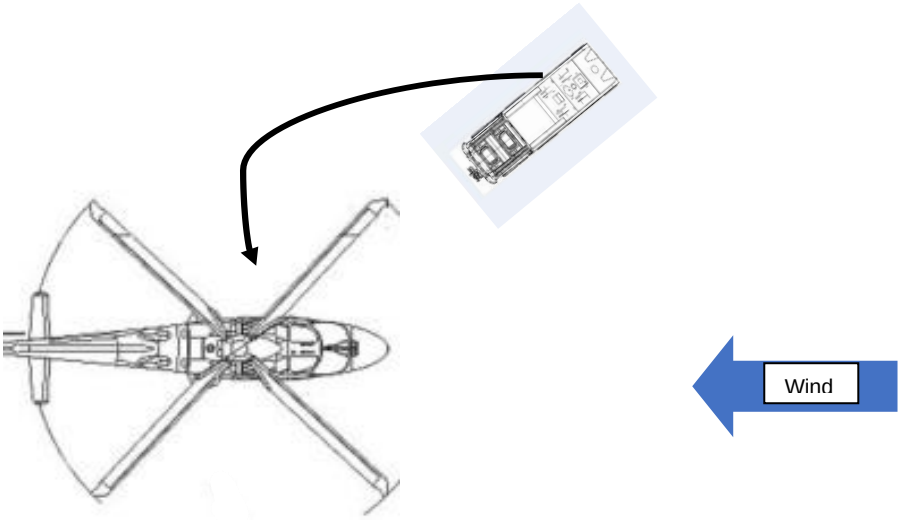
- Aircraft familiarization – Sqn personnel
- Endorsed PPT
- Redkite CMS.

Supporting Information:

- DFR-OG 009 - Aircraft Fires
- Op Instruction 001 - Aircraft Incidents
- Op Instruction 002 - CFR HSE Policy
- Op Instruction 005 - Low Speed Manoeuvring
- Op Instruction 006 - MPRV ARFF Positioning Deployment & Task
- Op Instruction 007 - MPRV Vehicle Operations
- Op Instruction 033 - BA Operations
- Op Instruction 066 - Fire Contaminants
- Op Instruction 069 - Polymer-Composites-and-MMMF
- Op Guidance 001 - Aircraft Incidents
- Op Guidance 002 - Incidents Involving Rotary Wing Aircraft
- Op Guidance 005 - Incidents Involving Small Aircraft
- Op Guidance 007 - Aircraft Engine Fire
- Op Guidance 008 - Aircraft Undercarriage Incidents
- MOD Aircraft Crash Hazards Document Set
- NATO STANAG / TO 00-105E-9-Chapter 13 (revision 16)
- DSA 1000m assessments
- DSA Water assessments
- DSA Response assessments

TTP 3 – Internal fire Incidents

Event Plan - Initial Deployment



Incident Commander Considerations:

- Emergency declared
- Location of A/C
- POB
- Wind Direction
- Confirm with all crew's nature of incident and location
- Evacuating PAX
- DRA followed by M/ETHANE
- Inform ATC of Tactical Mode & request external resources
- 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 safe holding area prior to designated casualty clearance set up by Medics.
- Direct Medics to SUV location (if resourced)
- 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

- Crash 1 to deploy on the port side of the A/C, this will give easy access if a BA team is needed to make entry
- Designated BA wearers will don BA sets but remain off air until instruction from Incident Commander
- Initially crew will respond and assist evacuating passengers/crew who will be directed towards the SUV and away from danger area (if resourced)
- Vehicle Commander will identify entry points to aircraft if required
- Deploy sufficient lengths of hose (45mm) or hose reel dependent upon the IC's DRA, for preparation for entry into airframe if required
- If BA entry is required instruction will be given by Incident Commander. BA Team will deploy according to current SOP with 45mm sideline or hose reel as appropriate to the incident
- BA team should consider use of thermal image camera to identify internal hot spots
- BA team aim will be to ensure survivable conditions therefore ventilation should be considered at the earliest opportunity and reported to Incident Commander
- Remove any casualties as appropriate and according to SOP.
- **No internal entry to airframe should take place until all external fires are extinguished or declared as under control.**

Specific Aircraft Hazards – (Make use of AQRC):

- Propellers
- Flammable liquids
- Pressurised gases
- Mk 9 oxygen masks are kept onboard for aircrew tom use in the case of being trapped in a smoke-filled environment. They will last between 15-20mins depending on activity levels.

Further Considerations:

- Ventilation priority
- BA teams
- Mark 9 oxygen masks are kept onboard for aircrew to use in the case of being

trapped in a smoke-filled environment. They will last between 15- 30 mins depending on activity levels
- BA Teams are to note that access to rescue the occupants is very tight
- Due to irrespirable atmosphere, should crew be trapped but are under A/C system oxygen prior to ventilation, then consideration should be given to a DRA being carried out to leave the casualties in situ until medical personnel can access the A/C to assess them
- As part of 14 SQN SOP's the aircraft will be shut down prior to evacuation.
- Aircrew SOPs require evacuation via the main front port side exit in the event of an emergency
- Shut down aircraft i.a.w SQN SOP.

Training:

- Aircraft familiarization – Sqn personnel
- Endorsed PPT
- Redkite CMS.

Supporting Information:

- DFR-OG 009 - Aircraft Fires
- Op Instruction 001 – Aircraft Incidents
- Op Instruction 002 – CFR HSE Policy
- Op Instruction 005 – Low Speed Manoeuvring
- Op Instruction 006 – MPRV ARFF Positioning Deployment & Task
- Op Instruction 007 – MPRV Vehicle Operations
- Op Instruction 018 – SUV positioning Deployment & Task
- Op Instruction 033 – BA Operations
- Op Instruction 066 – Fire Contaminants
- Op Instruction 069 – Polymer-Composites-and-MMMF
- Op Guidance 001 – Aircraft Incidents
- Op Guidance 003 – Aircraft Fuel Fires and Foam Application
- Op Guidance 005 – Incidents Involving Small Aircraft
- Op Guidance 006 – Aircraft Internal Fires
- Op Guidance 008 – Aircraft Undercarriage Incidents
- MOD Aircraft Crash Hazards Document Set
- NATO STANAG/TO 00-105E-9-Chapter 13 (revision 16).
- www.fast-air.co.uk
- www.flightglobal.comMOD Aircraft Crash Hazards Document Set.