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## Defence Fire and Rescue Aviation Tactics Techniques & Procedures

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<sup>1</sup> Other FRS Providers include Babcock Fire Services, Mitie Fire Service, QinetiQ Fire Service.

## Document Control

| Version | Date       | Author       | Role/Name                 | Status              | Changes    |
|---------|------------|--------------|---------------------------|---------------------|------------|
| V1.0    | 05/02/2024 | FS D Cain    | TM/SQAC – RAF Akrotiri    | Initial Issue       |            |
| V1.0    | 18/01/2024 | TSgt M Owen  | US Air Force Flt          | Doc Review          |            |
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## DEFENCE FIRE SERVICE

### ARFF QUICK REFERENCE CARD (AQRC-A55)

**USAF - U2**

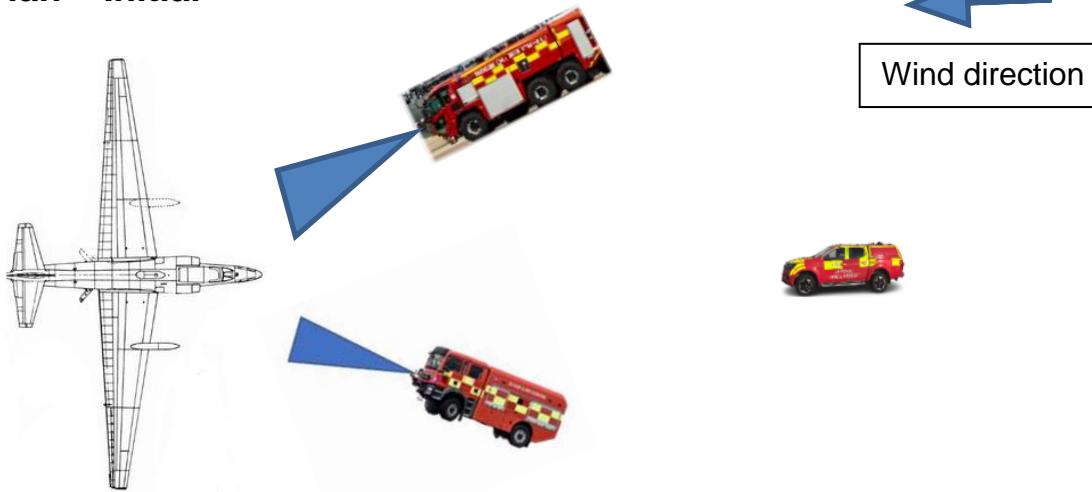
**Note: This TTP applies to U2 operations at RAF Akrotiri**

**SUV (Crew Commander), MPRV (Crash 1), Striker (Crash 2)**

|                        |        |
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| TTP 3 – Hydrazine leak | Page 8 |

### TTP 1 – Engine Fire

#### Event Plan – Initial



#### Incident Commander Considerations:

- Conduct and complete DRA
- Declare Tactical Mode
- Consider required agencies and resources
- Consider implementing MIP
- Direct firefighting actions
- Consider contacting aircraft commander via ATC or 121.6 if available
- Be aware of Pilot exiting aircraft
- Confirm/make safe Hydrazine<sup>2</sup> system by pinning the back port side of aircraft
- Direct all operational control and implement ICS
- Provide M/ETHANE report
- Maintain safe operations and ensure scene safety
- Direct other agencies

<sup>2</sup> Contains a small quantity, approximately 22 litres (see AQRC A55).

- Water consolidation/replenishment.
- Maintain contact with ATC and relevant agencies throughout
- Instigate JESIP for multi-agency incident.

### **Crash 1 - MPRV Actions:**

- Deploy vehicle to rescue side of aircraft.
- Deploy main monitor and extinguish fire utilising mass discharge if required
- Be aware of pilot exiting the aircraft
- Consider method of entry if pilot remain on board
- Don BA and utilise Initial Deployment Procedures (if required)
- Deploy HP hose reel if determined by IC DRA (if required)
- Consider use of TIC
- Make safe Hydrazine system by pinning the back port side of aircraft
- Make access to aircraft crew and confirm survivable conditions (if required)
- Confirm/make safe aircraft systems
- Aid Medics in extricating casualties.

### **Crash 2 - Striker Actions:**

- Deploy vehicle in dominate position in accordance with conditions
- Operate main monitor to lay foam blanket on the fuselage and extinguish fire utilising mass discharge if required
- Deploy HRET (as Vehicle IC see fit)
- Carry out check of area affected by fire to confirm area is safe
- Cool the airframe if required to prevent reignition
- Consider use of FLIR to check for hot spots before utilising TIC confirm temperature
- Consider further media application
- Provide scene safety
- Redeploy if required
- Maintain contact with IC

### **Specific Aircraft Hazards/Procedures:**

- Flammable liquids
- Pressurised gases
- Hydrazine
- Intake and exhaust

### **Further Considerations:**

- Aircraft position and wreckage
- Leaking fuel
- Passenger
- Other agencies
- Environmental conditions.

## **Training:**

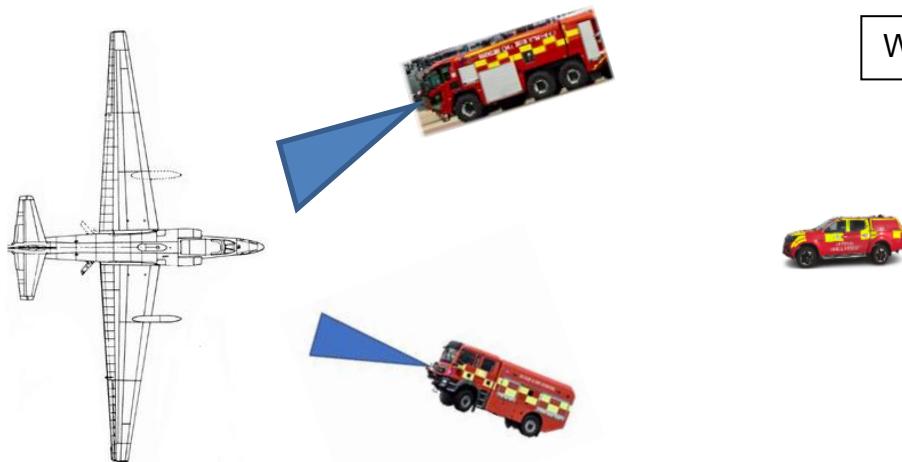
- Aircraft familiarisation – Sqn engineers
- Deployment exercise(s)
- Aircraft lecture – 6 monthly lesson / familiarisation presentation
- NATO STANAG/TO 00-105E-9-Chapter 13 (revision 16)
- AQRC A55.

## **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 IC considerations
- Ops Instruction 012 – Oshkosh Striker HRET Controls
- Ops Instruction 014 – Oshkosh Striker HRET Safety Considerations
- Ops Instruction 016 – Oshkosh Striker HRET Operator Considerations
- Ops Instruction 018 – SUV positioning Deployment & Task
- 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
- Op Guidance 004 – Military Fast Jets
- Op Guidance 006 – Aircraft Internal Fires
- Op Guidance 007 – Aircraft Engine Fire
- Op Guidance 008 – Aircraft Undercarriage Incidents
- NATO STANAG/TO 00-105E-9-Chapter 13 (revision 16)
- AQRC A55.

## TTP 2 – Internal Fire

### Event Plan – Initial



### Incident Commander Considerations:

- Conduct and complete DRA.
- Declare Tactical Mode.
- Consider required agencies and resources.
- Consider implementing MIP.
- Direct firefighting actions.
- Consider contacting aircraft commander via ATC or 121.6 if available.
- Be aware of Pilot exiting aircraft.
- Confirm/make safe Hydrazine<sup>3</sup> system by pinning the back port side of aircraft.
- Direct all operational control and implement ICS.
- Provide M/ETHANE report.
- Maintain safe operations and ensure scene safety.
- Direct other agencies including SME USAF hydrazine spill team.
- Water consolidation/replenishment.
- Maintain contact with ATC and relevant agencies throughout.
- Instigate JESIP for multi-agency incident.

### Crash 1 - MPRV Actions:

- Deploy vehicle to rescue side of aircraft taking into consideration wind direction, gradient and other ARFF vehicle positions
- Deploy main monitor and extinguish fire utilising mass discharge
- Be aware of pilot exiting the aircraft
- Consider method of entry if pilot remain on board
- Don BA and utilise Initial Deployment Procedures (if required)
- Deploy high pressure hose reel as determined by IC DRA (if required)
- Consider use of TIC
- Make safe Hydrazine system by pinning the back port side of aircraft
- Make access to aircraft crew and confirm survivable conditions (if required)
- Confirm/make safe aircraft systems
- Aid Medics in extricating casualties.

<sup>3</sup> Contains a small quantity, approximately 22 litres (see AQRC A55).

## **Crash 2 - Striker Actions:**

- Deploy vehicle in dominate position in accordance with conditions
- Operate main monitor to lay foam blanket on the fuselage and extinguish fire utilising mass discharge if required
- Deploy HRET (as Vehicle IC see fit)
- Carry out check of area affected by fire to confirm area is safe
- Cool the airframe if required to prevent reignition
- Consider use of FLIR to check for hot spots before utilising TIC confirm temperature
- Consider further media application
- Provide scene safety
- Redeploy if required
- Maintain contact with IC

## **Specific Aircraft Hazards/Procedures:**

- Flammable liquids
- Pressurised gases
- Hydrazine
- Intake and exhaust

## **Further Considerations:**

- Aircraft position and wreckage
- Leaking fuel
- Passengers
- Other agencies
- Environmental conditions.

## **Training:**

- Aircraft familiarisation – Sqn engineers
- Deployment exercise(s)
- Aircraft lecture – 6 monthly lesson / familiarisation presentation
- NATO STANAG/TO 00-105E-9-Chapter 13 (revision 16)
- AQRC A55.

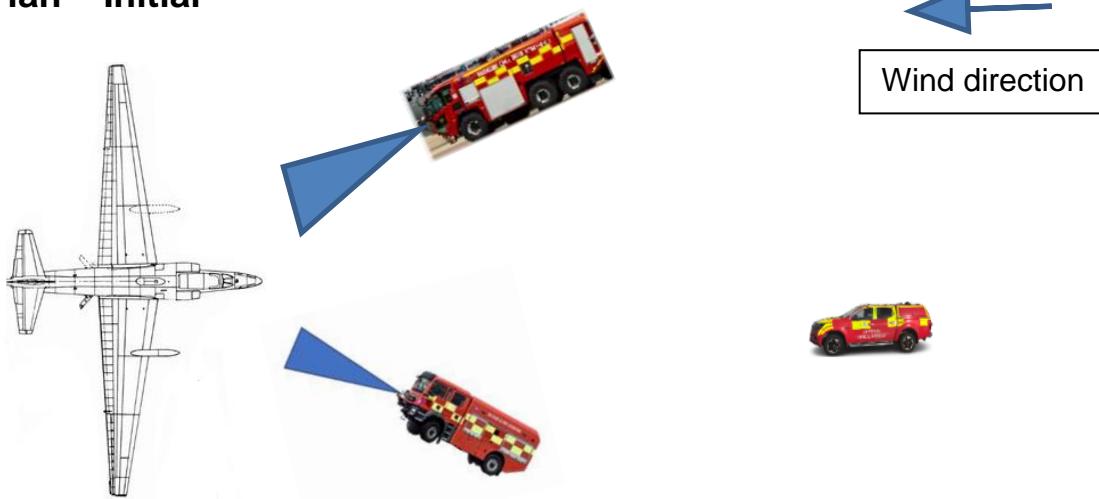
## **Supporting Information:**

- 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 IC considerations
- Ops Instruction 012 – Oshkosh Striker HRET Controls
- Ops Instruction 014 – Oshkosh Striker HRET Safety Considerations
- Ops Instruction 016 – Oshkosh Striker HRET Operator Considerations

- Ops Instruction 018 – SUV positioning Deployment & Task
- 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
- Op Guidance 004 – Military Fast Jets
- Op Guidance 006 – Aircraft Internal Fires
- Op Guidance 007 – Aircraft Engine Fire
- Op Guidance 008 – Aircraft Undercarriage Incidents
- NATO STANAG/TO 00-105E-9-Chapter 13 (revision 16)
- AQRC A55.

## TTP 3– Hydrazine Leak

### Event Plan – Initial



### Incident Commander Considerations:

- Conduct and complete DRA
- Declare Tactical Mode
- Consider required agencies and resources inc. SME USAF hydrazine crash team.
- Consider implementing MIP
- Direct firefighting actions
- Consider contacting aircraft commander via ATC or 121.6 if available
- Be aware of Pilot exiting aircraft
- Confirm/make safe Hydrazine<sup>4</sup> system by pinning the back port side of aircraft.
- Direct rescue crew if required
- Direct all operational control and implement ICS
- Provide M/ETHANE report
- Maintain safe operations and ensure scene safety
- Direct other agencies.
- Water consolidation/replenishment.
- Maintain contact with ATC and relevant agencies throughout
- Instigate JESIP for multi-agency incident.

### Crash 1 - MPRV Actions:

- Deploy vehicle to rescue side of aircraft taking into consideration wind direction, gradient and other ARFF vehicle positions
- Deploy main monitor and extinguish fire utilising mass discharge
- Be aware of pilot exiting the aircraft
- Consider method of entry if pilot remain on board
- Don BA and utilise Initial Deployment Procedures (if required)
- Deploy high pressure hose reel as determined by IC DRA (if required)
- Consider use of TIC
- Dilute hydrazine
- Make safe Hydrazine system by pinning the back port side of aircraft.

<sup>4</sup> Contains a small quantity, approximately 22 litres (see AQRC A55).

- Make access to aircraft crew and confirm survivable conditions (if required)
- Confirm/make safe aircraft systems
- Aid Medics in extricating casualties.

## **Crash 2 - Striker Actions:**

- Deploy vehicle in dominate position in accordance with conditions
- Operate main monitor to lay foam blanket on the fuselage and extinguish fire utilising mass discharge if required
- Deploy HRET (as Vehicle IC see fit)
- Carry out check of area affected by fire to confirm area is safe
- Cool the airframe if required to prevent reignition
- Dilute Hydrazine to make safe.
- Consider use of FLIR to check for hot spots before utilising TIC confirm temperature
- Consider further media application
- Provide scene safety
- Redeploy if required
- Maintain contact with IC

## **Specific Aircraft Hazards/Procedures:**

- Hydrazine
- Flammable liquids
- Pressurised gases

## **Further Considerations:**

- Diluting hydrazine
- Aircraft position and wreckage
- Leaking fuel
- Passenger
- Other agencies
- Environmental conditions.

## **Training:**

- Aircraft familiarization
- Deployment exercise(s)
- Redkite CMS
- MOD Aircraft Crash Hazards Document Set (ACHaz)

## **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 IC considerations
- Ops Instruction 012 – Oshkosh Striker HRET Controls

- Ops Instruction 014 – Oshkosh Striker HRET Safety Considerations
- Ops Instruction 016 – Oshkosh Striker HRET Operator Considerations
- Ops Instruction 018 – SUV positioning Deployment & Task
- 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
- Op Guidance 004 – Military Fast Jets
- Op Guidance 006 – Aircraft Internal Fires
- Op Guidance 007 – Aircraft Engine Fire
- Op Guidance 008 – Aircraft Undercarriage Incidents
- NATO STANAG/TO 00-105E-9-Chapter 13 (revision 16)
- AQRC A55.