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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 AQRC, DFRS Fire Officers employed within DFRS, DIO & RN, are included for information purposes only.

VERSION CONTROL HISTORY

Version	Date	Author	Role	Change	Status
V1.0	25/10/2024	Phil McGuinness	CFR Hd of Response	Drafted for DFR HQ review	Draft
V1.0	06/11/2024	Shane Cook	AM for DFR HQ		Stakeholder Review
V1.1	07/11/2024	Phil McGuinness	CFR Hd of Response	Re-issued following minor typo adjustments	Re-issued
V1.2	08/09/2025	Mike Harrison	RAF Valley	Updated pictures: 15, 16, 17, 19	Station review
V1.2	11/09/2025	Shane Cook	DFR HQ ARFF SME	Inclusion of Paragraphs 8 and 9	Stakeholder Review
V1.2	11/09/2025	Phil McGuinness	CFR Hd of Response	Re-issued following stakeholder and station review	Re-issued

Note: This document was previously reviewed by **AM Shane Cook** (along with the **Deputy-Hawk-Chief-Engineer**). This document was previously issued as an SOP-08 (**dated: 10 01 2024**). It has now been broken out into two AQRCs for the Hawk T1/1A and T2 - Mk 128 and T.167 AAES (in-line with the contracted AQRC and ATP process).



ARFF QUICK REFERENCE CARD (AQRC-A10)

BAe Hawk T Mk2 - Mk 128 and T.167

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Dimensions

Hawk T Mk2 - Mk 128 and T.167



ICAO Crash Cat 3 (1200 litres)

Fuel Capacity:

Wing: 184-gallon fuel tank
Central fuselage: 181-gallon flexi fuel tank

Wingspan 9.08m
Length 12.43m
Height 3.98m
Max Crew 2

Introduction

1. This AQRC has been created to ensure the safety of all emergency responders, and aircrew when making the Hawk T Mk2 - Mk 128 and T.167 Aircraft Assisted Escape Systems (AAES) safe during the rescue phase of operations following a crash. It will also assist emergency responders to make informed decisions when performing rescues or incident management activities that are critical to life.
2. The sequence of making the Hawk T (Mk2) AAES safe for emergency rescue listed in this document **should**⁴ be followed to ensure the risk to firefighters is ALARP. Acquisition and subsequent training requirements on the revised procedures **should** be recorded on CMS.
3. The Hawk T Mk 2 is fitted with Martin-Baker Mk GB10LH seats front and rear, whilst the Hawk T.167 variant has Martin-Baker MK SA10 LH and RH seats. Each are similar in their actuation and operation, but the SA variant has a slightly different expellant agent to cater for Middle Eastern temperatures. Both have Command Eject, by which the occupant(s) can use to escape the aircraft in an emergency, either during flight or at ground level, whilst moving or stationary (zero-zero seats). These seats are actuated by pulling the Ejection Seat Firing Handle (ESFH)⁵.

Entry / Canopy Opening – Normal & Emergency

Entry/Canopy Opening - Normal & Emergency

Operational Action Sequence – Hawk T Mk2 - 128 and T.167

4. Phase 1 – Gain Access into Cockpit

- a. **Normal Means** – Following the instructions located on the side of the fuselage. From ground level, using handle as identified in figures 1 & 2, open the canopy to the furthest means achievable, by lifting up and away.



(figure 1)



(figure 2)



(figure 3)

- b. Whilst this is occurring, another crew member is to split the short-x ladder and prepares to use the wider section. Pitch the wider section of the split short extension ladder to the front seat area of the cockpit, ensuring that the lugs of the ladder are resting on the inside of the airframe (figure 3).

- c. **Emergency Means - Operate MDC:** (figure 4). An external firing handle is located on each side of the canopy near its forward end. Each flush fitting handle is stripped black and yellow and bears the legend PUSH in white letters. A sharp push causes the internal fastener to disengage and the firing handle to stand proud of the canopy frame. The handle is connected to 1.5 meters of cable. The operator should grasp the handle and, facing away from the aircraft, walk forward towards the nose of the aircraft, take up the slack and then

⁴ For the context of this Ops Instruction the word "should" is to be used in the context of "must"

⁵ It is therefore vital seat pan firing handle pins are fitted to front & rear ejection seats (Mk10LH seats) ASAP.

sharply tug the cable. When the taut cable is tugged both sections of the MDC explode, irrespective of whether the internal firing handles are secured by their safety pins.



(figure 4)

WARNING - Consider MDC 2.5m blast zone and 20m fragmentation zone

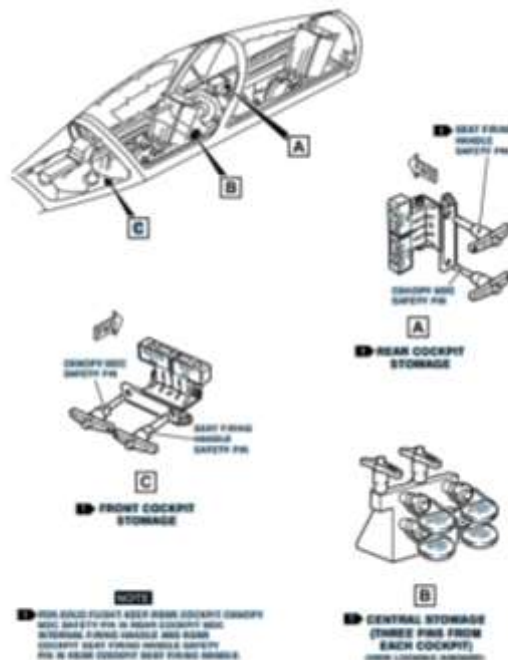
Aircraft Assisted Escape System

5. Phase 2 - Make Safe Front Seat

- Place the **Seat Firing pin** through the housing and seat firing handle.

a. If safety pins are not located on the ARFF vehicles, retrieve from designated locations within the cockpit (figure 5). The pins are located, along with others, in the a/c stowage found on the port canopy sill behind the front ejection seat. The top two T-shaped pins are for the front and rear MDC detonator units.

(figure 5)

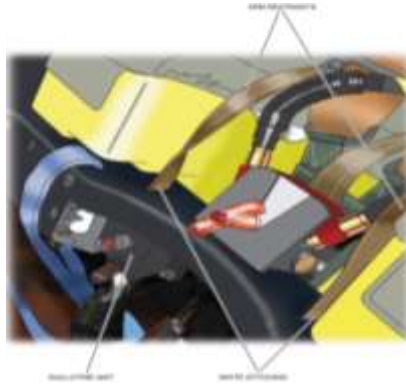


b. **Seat Firing Handle Safety pin** - If the initial action of opening the canopy has given sufficient access, then pin the front Seat Firing Handle (figures 6, 7 & 8), ensuring that the pin is fully inserted. If the canopy has not been sufficiently opened from ground level, then from the head of the ladder open the canopy to allow safe access to the pins and the subsequent pinning.

WARNING - Do not open canopy **fully** until front Seat Firing pin has been inserted



(figure 6)



(figure 7)



(figure 8)

SAFETY- Check that the ESFH safety pin is fitted through the housing and firing handle (figure 8)

WARNING – Although the front ESFH is in place, the front seat must be treated as **LIVE** until the rear seat ESFH has been fitted due to the Command Eject feature.

- c. If required, remove mask of front seat occupant.
- d. Throttle back aircraft - if required.

6. **Phase 3- Make Safe Rear Seat**

- a. Reposition ladder to rear seat area (figure 9).



(Figure 9, NB* salvage sheet only used to protect airframe during photo session)

- b. Two (2) safety pins are to be fitted to achieve ALARP:

- **Seat Firing pin** through the housing and seat firing handle.
- **MDC pin** to the MDC detonator unit.

c. **Pin Rear MDC.** (figures 11 & 12)



(figure 11)



(figure 12)

- d. If the rear seat is occupied and the need is such, then remove occupants face mask.

7. **Phase 4:** Reposition the ladder to the front seat, enabling a fire fighter to ascend and pin the front MDC.

a. **Pin front MDC.** (figures 13 & 14)



(figure 13)



(figure 14)

8. The above actions assume that the aircraft has come to rest on its undercarriage. Should the aircraft's final resting position be on its 'belly' then the same process (paras 4 – 7) should be carried out, less the ladder and the additional firefighter.

9. If the canopy is already open or the emergency access has been actuated, then the rear seat should be pinned first, this will then nullify the command eject system, followed by the pinning of the front seat. As mentioned in para 8, this can be carried out utilising a single firefighter, maintaining the minimum personnel within the risk area principles as a recognised Safe System of Work (SSoW).

Aircraft Shutdown

10. Once AAES have been made safe, there may be a need to shut down the aircraft engine. The actions to do this are as follows:



(figure 15)

i. Move the High-Pressure cock to the **OFF** position by moving the throttle back to idle, lifting the lever over the gate and shutting down the engine.



(figure 16)

ii. There are six switches located aft of the HP cock that need to be switched to the OFF position. Switch the BATT No1 and No2 off, Switch the FUEL PUMP off. Switch the GENS off and switch ENG START off.

NOTE: ENG START, BATT 1 AND 2 AND FUEL PUMP SWITCHES HAVE TO BE LIFTED OVER THE GATE AND THEN BACK TO TURN OFF.



(figure 17)

iii. Open the low-pressure cock by lifting the cover and moving the switch outboard towards the cover. This is located on the port side of the forward cockpit next to the PEC connector behind the six switches. Located in front and rear.

Once these actions have been carried out then safe extraction of the occupant(s) can commence

Crew Extraction

11. The following disconnections are required to remove the occupant:



(figure 18)

i. Remove oxygen mask by lifting the clip.



(figure 19)

ii. Remove the PEC connector by pressing down the green portion in the centre and lifting the silver-coloured handle at the rear. This will also disconnect the leg lines from the ejection seat, but they will still be wrapped around the pilots' legs.



(figure 20)

iii. Remove the PSP lowering line



(figure 21)



(figure 22)

iv. Rotate the Quick Release fitting to the red portion and squeeze to release harness.

Note: The Hawk Mk128 does have arm restraints, whereas the Mk167 does not

Finally, the occupant(s) can be removed from the aircraft

Additional Information

References:

AP-101B-4402-15: Hawk T Mk 2 Aircrew Manual
MOD Aircraft Crash Hazards Document Set (ACHaz)
National Operational Guidance - Risk assessment at an incident
National Operational Guidance - Aircraft Incidents
NATO Standardization Agreement 3896 - Aerospace Emergency Rescue and Mishap Response Informa

Additional Reference Documentation:

- Op Instruction 001 – Aircraft Incidents
- Op Instruction 002 – CFR HSE Policy
- 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 Guidance 001 – Aircraft Incidents
- Op Guidance 003 – Aircraft Fuel Fires and Foam Application
- Op Guidance 004 – Military Fast Jets
- Op Guidance 006 – Aircraft Internal Fires
- Op Guidance 007 – Aircraft Engine Fire
- Op Guidance 008 – Aircraft Undercarriage Incidents
- MOD Aircraft Crash Hazards Document Set