



Defence
Infrastructure
Organisation

SAFETY ALERT

Part A.

**Subject: Hawker Siddeley Switchgear Ltd
Falcon Beta 1 Ring Main Units**

Number: SA 2015/15

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SEE/DIO

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This Safety Alert is to be read by:

1. **Authorised Persons (Electrical)**
2. **Authorising Engineer (Electrical)**
3. **DIO Service Manager (or equivalent for non NGEN contracts)**
4. **DIO's Maintenance Management Organisations**
5. **Others**

Others who may be affected by the content of this Safety Alert might include:

Site/Regional Health and Safety Advisors, Prime Contractors, Project Managers, Private Finance Initiatives, Public, Private Partnership and other traditionally procured contracts, Site Estate Authority Teams and Property Managers with responsibility for MOD projects and Property Management Works Services (including the legacy work of EWCs/WSMs), Coordinating Authorising Engineers, Heads of Establishments and Top Level Budget Holders,

Summary:-

When operating the Ring Main Unit's Circuit Breaker from Earth On to Earth Off, there was a momentary unintentional energisation of the Circuit Breaker's outgoing cable terminations.

When it takes effect: Immediately

When it is due to expire: When updated or rescinded.

Health and Safety

Aim

1. To bring to the attention of appropriate persons the potential failure of Falcon Beta 1 Ring Main Units, to instigate control measures, and collect data to enable remedial measures to identified.

Introduction

2. Compliance with the contents of this Alert will enable compliance with the Health & Safety at Work etc Act 1974 and its subordinate Regulations.
3. The appropriate MOD officer shall arrange for the Maintenance Management Organisation (MMO) contractor to carry out all actions in accordance with this Alert.
4. Any work required as a result of this Safety Alert must be carried out in accordance with JSP 375 Part 2 Volume 3 – High Risk Activities on the Defence Estate.
5. On MOD Establishments occupied by United States Visiting Forces (USVF) responsibility is jointly held by USVF and DIO(USF). At base level this jointly managed organisation is to take appropriate action to implement the contents of this Alert. Where this Alert contains procedures which differ significantly from USVF practice, DIO (USF) code of practice will be issued.

Requirement

Part A.

6. The Authorised Person (Electrical) and Authorised Engineer (Electrical) are to immediately introduce the following Operation Restriction:
 - a. All Falcon Beta 1 Ring Main Units are to be made 'dead' prior to the removal of the EARTH on the Circuit Breaker part of the unit.
 - b. This can be achieved by opening ring switches to make the busbar dead whilst operating the circuit breaker. There is no requirement for the Ring Main Unit to be made dead remotely.

Note. Operation Restrictions are covered in JSP375 Volume 3, Chapter, Section 4.6.

7. The MMO, on direction from the DIO Service Manager, should initiate the following tasks to enable suitable and sufficient data to be collected to determine appropriate remedial works to be identified enabling the Operational Restriction to be lifted:
 - a. The location (Establishment/Sub Station Designation), quantity, serial number and date of manufacturer of ALL Hawker Siddeley Switchgear Ltd Falcon Beta 1 RMU's.
 - b. Notify the DIO Service Delivery Performance Management Team, DIO SD-Perf Mgt Team (MULTIUSER) account, through their respective DIO Service Manager identifying the location, quantity, serial number, and date of manufacture of **ALL** installed Hawker Siddeley Switchgear Ltd Falcon Beta 1 RMUs. **A nil return is required from Establishments with no installed Falcon Beta RMUs.**
8. The requested data is required by 8th January 2016 and will be reviewed on 11th January 2016.

9. Where defective Hawker Siddeley Switchgear Falcon Beta 1 units are identified on an Establishment, the 4Cs risk register should be suitably annotated including the introduction of the Operational Restriction.

Background

10. The Falcon Beta RMU Circuit Breaker had been switched out, isolated and earthed to facilitate the changing of the local transformer. A strand of binding wire had been connected across the three phases in readiness for a pressure test.
11. As the earth switch was moved from the ON to OFF position there was a flash and a bang in the cable box area. The binding wire between L2 and L3 had vaporised and there were signs of heating on the wire between L1 and L2. The fault was found to be repeatable.
12. The early Falcon Beta 1 units have a spring assisted mechanism to remove the earth from the Circuit Breaker – later models did not have this feature. The spring can cause the contacts to travel beyond the OFF position and come close to the ON position, and the live busbars, causing the outgoing terminals of the Circuit Breaker to become energised.
13. Related Documents:
 - a. DIN 2015/0032/00 dated 17 Nov 15
 - b. SOP 2015/0400/00 dated 17 Nov 15

End.