MINISTRY OF DEFENCE

Defence Infrastructure Organisation

SAFETY ALERT

Subject: Schneider Electric 11 kV Genie Evo Circuit Breakers

Number: SA 10/11

DIO Secretariat Sponsor: RA Cawthorne	Date of issue: 11 October 2011

Contact if different from above Sponsor:

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Who Should Read this:

CEstOs, Top Level Budget Holders, Project Sponsors, MOD Project Managers and others within the IPT (for both Prime, PFI/PPP and traditionally procured contracts), Defence Estates Advisors and Property Managers/Site Estate Representatives with responsibility for MOD projects and Property Management Works Services (including the legacy work of EWCs/WSMs) Coordinating Authorising Engineers, Authorising Engineers Electrical, Authorised Persons Electrical, purchasers and installers of final electrical distribution equipment.

When it takes effect: Immediately	When it is due to expire: No Expiry except on update.

Health and Safety

Document Aim:

To impose an operational restriction on 11 kV Genie Evo Circuit Breakers manufactured by Schneider Electric between 01 January 2003 and 31 March 2006 bearing serial numbers GDVA03XXX to GDVC06XXX.

Product	**11 kV Genie Evo Circuit Breakers rated at 200A, 630A and 1250A manufactured between 01 January 2003 and 31 March 2006 bearing serial numbers GDVA03XXX to GDVC06XXX**
Manufacturer / Supplier	**Schneider Electric**
Problem	**On a number of 1250A disconnectors the drive shaft from the disconnector mechanism to the main contacts has broken during service**
Scope	**Investigations to date show that the 1250A disconnectors are at greatest risk. There have been no failures reported on the 200A & 630A versions but investigations are continuing. As a precautionary measure the operational restriction shall apply to all three ratings of the switchgear manufactured during the above period. Genie Evo Switchgear manufactured after March 2006 is not affected by this notification and nor is the Evolis vacuum circuit breaker, which may be operated as normal.**
Risk	**If the disconnector shaft breaks when the disconnector is operated to the Main On position, then the contacts may not fully engage resulting in arcing to take place under normal load conditions or when fault current passes through the circuit breaker. If arcing does take place, depending on the value of the current and the length of time in this condition, it could lead to an internal electrical fault.**
Action	**The disconnector mechanism is to be padlocked in its present position to prevent any manual operation.** **Schneider Electric will write to each customer supplied with affected product to notify them of the potential operational issue and to arrange for replacement of the disconnector including the drive shaft. Schneider Electric will replace the Genie Evo disconnector drive shafts in the affected period of manufacture whether they have broken or not.** **The 1250A disconnectors are to be given priority for this remedial work, but any 630A or 200A disconnectors forming part of the same switchboard are also to be modified at the same time to prevent second outage.** **If a disconnector is found to have a broken drive shaft, immediate contact with Schneider must be made in order that the affected parts can be repaired.** **For further information contact Mr Michael Young, Schneider Electric, Leeds. Tel: 0113 290 3819 or 0780 5655 148.**

1. Introduction

a. COMPLIANCE WITH THE CONTENTS OF THIS ALERT WILL ENABLE COMPLIANCE WITH THE HEALTH & SAFETY AT WORK ETC ACT 1974 AND ITS SUBORDINATE REGULATIONS.

b. The appropriate MOD officer shall arrange for the Maintenance Management Organisation (MMO) contractor to carry out all actions in accordance with this Alert.

c. Any work required as a result of this Safety Alert must be carried out in accordance with JSP 375 Volume 3 – MOD's Safety Rules & Procedures.

d. 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.

2. Background

National Equipment Defect Report (NEDeR) 2011/0688/00 notified the following incident:

a. The Genie Evo circuit breaker incorporates a 3 position disconnector connected in series with the Evolis vacuum circuit breaker. There are three disconnector current ratings: 200A, 630A and 1250A. Figure 1 shows a view of a broken drive shaft and Figures 2 and 3 show the different design of the 200/630A and 1250A contacts inside the disconnector.

Figure1: Broken Drive Shaft

Figure 2: 200A/630A Disconnector Contacts

Figure 3: 1250A Disconnector Contacts

b. Schneider Electric UK has become aware of potential operational issue with the Genie Evo Switchgear manufactured from 1 January 2003 to 31March 2006. On a number of 1250A disconnectors the drive shaft from the disconnector mechanism to the main contacts has broken during service. Consequently, the mechanism and its position indicator may not correctly represent the actual position of the main contacts. Investigation to date has shown that the 1250A disconnectors are at greatest risk. There have been no failures reported on the 200A and 630A version and the findings to date indicate they should not be affected. However, investigations continue on the 200A and 630A version and a further update will be provided once the necessary information is available.

c. Genie Evo Switchgear manufactured after March 2006 is not affected by this notification. The Evolis vacuum circuit breaker is also not affected and may be operated as normal.

3. Requirement

a. This Safety Alert has been raised in response to NEDeR 2011/0688/00.

b. **URGENT**: Addressees of this Safety Alert are to bring its contents to the attention of their Authorising Engineers (Electrical) (AE(E)), or equivalent, in order to make them aware of the risks posed by Genie Evo Switchgear manufactured from 01 January 2003 to 31March 2006 which may be in service on their sites.

c. AE(E)s are to ensure that the restriction identified above is put in place with immediate affect and contact made with Mr Michael Young of Schneider Electric (if contact has not already been made by Schneider Electric).

d. Any action required by this Safety Alert is to be taken at the earliest possible opportunity.

- The earliest possible opportunity should be established commensurate with operational requirements and the risk to personnel and property; with the highest priority given to heavily used/urgent operational facilities and the lowest to unoccupied or rarely occupied or non essential facilities.