



Defence  
Infrastructure  
Organisation

# Safety Alert                      Parts A, B & C

## Subject: Powered Industrial Doors – Motor Security

### Number SA 2020/53

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**This Safety Alert is to be read by the following so appropriate action can be taken:**

- 1. DIO Service Manager (or equivalent for non-NGEC contracts)**
- 2. DIO's Maintenance Management Organisations**
- 3. Others**

**Others interested in the content of this Safety Alert might include:**

Heads of Establishments, Prime Contractors, Private Finance Initiatives, Public-Private Partnership and other traditionally procured contracts, Infrastructure Managers and Property Managers with responsibility for MOD projects and Property Management Works Services (including the legacy work of EWCs/WSMs), Health & Safety Advisors.

**When it takes effect:** immediately

**When it is due to expire:** When updated or rescinded.

Health and Safety

This Safety Alert does not necessarily cover all aspects of the subject matter and readers should make themselves aware of other potential issues. Readers should also not rely on DIO publications as their only means of becoming aware of safety, operational or technical issues, but they should consult widely across other media to maintain awareness.

## Aim

1. To bring to the attention of appropriate persons the risks associated with Powered Industrial Doors<sup>1</sup>, and to highlight the importance of Planned Preventative Maintenance (PPM) in ensuring that fitted safety devices will operate safely and correctly, in all circumstances, including in the event of a critical component failure. This Safety Alert also highlights the need for vigilance when completing PPM to identify the absence of Safety devices, the installation of non-standard parts, unapproved modifications, defects including those unrectified or unreported, ensuring they are not left unmanaged which could adversely affect safety for the operators of these systems.
2. Additionally, to ensure that where issues are identified they are to be promptly reported to the appropriate persons, including Heads of Establishments (HoE), that suitable and detailed risk assessments are undertaken, and appropriate risk mitigation put in place.

## Introduction

4. Compliance with the contents of this Alert will enable compliance with the Health & Safety at Work etc. Act 1974 and its subordinate Regulations.
5. The appropriate MOD officer shall arrange for the Maintenance Management Organisation (MMO) contractor to carry out all actions in accordance with this Safety Alert.
6. Any work required because of this Safety Alert must be carried out in accordance with JSP 375 Parts 1 & 2.
7. 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 a DIO (USF) code of practice will be issued.

## Background

8. A member of staff sustained cuts and bruising to his right arm whilst attempting to open the electrically operated doors in a MOD Establishment. The injury was caused by the electrical drive motor falling from the top right-hand side of the folding door panel. An investigation as concluded that the electrical motor drive was inadequately secured. This door system was originally manufactured and supplied by European Profiles and was installed in 1992 by Rhino doors; it is not known how many of this door systems, or similar systems with suspended motor/drive gear have been fitted across the estate, nor when the inadequate fixings were installed.



<sup>1</sup> including Vertical and Bottom Fixed, Horizontal Folding, Sliding Concertina Doors

Photo 1 Showing the Motor

- Investigation of the incident identified that the motor fixing bolts at just 15mm were of insufficient length, and consequently very little thread was engaged (3.5 mm), providing insufficient mechanical attachment to the door base plate. Additionally, no safety tether was fitted to the motor/drive gear to retain it in the event of a mechanical failure.



Photo 2 Showing depth of thread available to engage with door base plate



Photo 3 Showing Motor Suspended under Door Frame

- Rhino Doors do not utilise this type of bolt to fix the motor in its current doors systems. The current arrangements for fixing the motor to the door is by 4 x 40mm M6 socket set cup screws that are fully threaded into the motor fixing points, these are then secured to the door

by means of a flat washer, a spring washer and an M6 nut. As an additional measure, thread lock is also applied.

## Requirements

11. All Powered Industrial Doors should be subject to Planned Preventive Maintenance (PPM) and be assigned relevant tasks for the door type and its safe operation. Task 220, of the hard FM standards and Task Schedule, details a 6 monthly service which identifies this maintenance requirement. Further Task 221 details the requirement for a 12 monthly Competent Person Inspection who should have a necessary degree of independence from those maintaining the doors. This inspection should provide a full condition report, identifying that the equipment is safe for continued use, or otherwise, and give details of any faults or defects requiring rectification prior to it being deemed safe for continued use.
12. Those undertaking PPM and Inspection must be vigilant in identifying unapproved modifications, the installation of non-standard components or where safety devices are fitted have not been damaged or defeated. The absence of anti-fall devices or other anti-fall design features should also be noted and recorded.
13. The DIO service manager should assure themselves that the assurance arrangements are suitable and sufficient.
14. Any work incurring expenditure of MOD funding requires appropriate authority from the MOD officer responsible for the establishment.

## Part A

15. All Powered Industrial Doors should be inspected for motor/drive gear security during next PPM visit or Competent Person inspection, whichever is the sooner, to identify those door systems where the drive/motor is suspended, and where the risk of it falling in event of mechanical fixing failure is not mitigated by fitting of a tether, and to determine if inappropriate threaded fasteners have been installed.
16. The MMO is to notify the DIO Service Manager, HoE and establishment 4Cs Duty Holder of Powered Industrial Doors that are fitted with suspended motors/drive gear and those door systems not fitted with an anti-fall device; the 4Cs risk register should be suitably annotated and local risk assessments reviewed.
17. The MMO is to notify the DIO Regional Delivery Safety Alerts Team (DIO-RDSafetyAlerts@mod.gov.uk) account, through their respective DIO Service Manager
  - a. The identification of the location, quantity and model number of Powered Industrial Doors or, shutters, identifying date of last inspection, maintenance and testing; advising if the equipment is CE marked
  - b. The HoE must be notified where unrecorded or unmaintained, Powered Industrial Doors systems are identified.

### **A nil return is required from Establishments with no Powered Industrial Doors systems.**

18. Upon receipt of information from MMO, the HoE may need to review risk assessments considering any new information or previously unidentified risk. Support to undertake suitable and sufficient risk assessments may be obtained from respective TLB Chief Environment and Safety Officers (CESOs), or alternatively through DIO Regional Health and Safety Support Team.
19. The data requested at paragraphs 15 to 16 is required by 2nd Nov 2020 and will be reviewed on the 27<sup>th</sup> Nov 2020.
20. Where work orders are raised, this information should be included in the data reported under Para 18 above.
21. The contents of this Alert should be considered when undertaking Technical Inspections or Appraisals of this type of asset.

## **Part B**

22. Where it is identified that Industrial Door Systems are fitted with suspended motors/drive gear the threaded fasteners providing the mechanical attachment are to be examined for suitability (including length) and where appropriate a solution similar to that adopted by Rhino doors is to be employed, i.e. fixing the motor to the door by 4 x 40mm M6 socket set cup screws that are fully threaded into the motor fixing points, these are then secured to the door by means of a flat washer, a spring washer and an M6 nut. As an additional measure, thread lock is also applied.
23. Where the above cannot be adopted due to blind holes or similar, thread lock is to be applied to the most suitable length threaded fasteners, fitted where practicable with a flat washer and spring washer. Where there is any doubt regarding the suitability or security of the motor/drive gear attachment to the door frame a tether should be fitted to prevent the motor/drive gear falling in the event of a failure of the mechanical attachment.
24. Once actions at Paras 22 to 23 have been completed, the MMO is to notify the DIO Service Manager, HoE and establishment 4Cs Duty Holder of the location and door number of all Powered Industrial Doors which have been modified under this Safety Alert, the 4Cs risk register should be suitably annotated.

## **Part C**

25. The MMO is to notify the DIO Service Delivery Performance Management Team, DIO SD-Perf Mgt Team (MULTIUSER) account, through their respective DIO Service Manager of the date actions detailed in **Part B**, was completed.

End