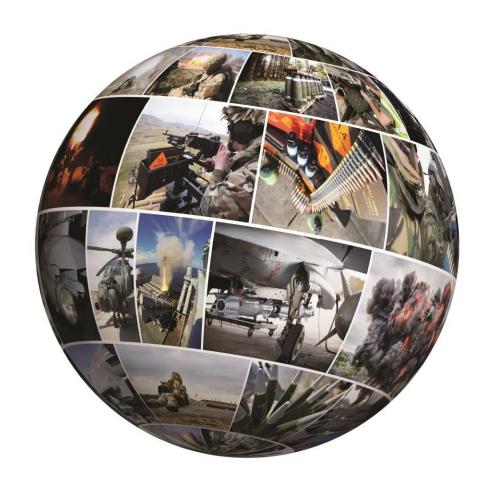


DSA 03.OME Part 2 (JSP 482) -Defence Code of Practice (DCOP) and Guidance Notes for In-Service and Operational Safety Management of OME

Defence OME Safety Regulator





## **DSA VISION**

Protecting Defence personnel and operational capability through effective and independent HS&EP regulation, assurance, enforcement and investigation.

#### **PREFACE**

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3. Proposed changes, recommendations or amendments to DOSR Regulations and Guidance publications can be submitted by anyone using the DOME Request for Change Function (RFC) available for every Dome publication in the DOME library located <a href="here">here</a> or by completing the Word version of the Change Proposal Form available from the DOME Library, see figure 1 below for the location.

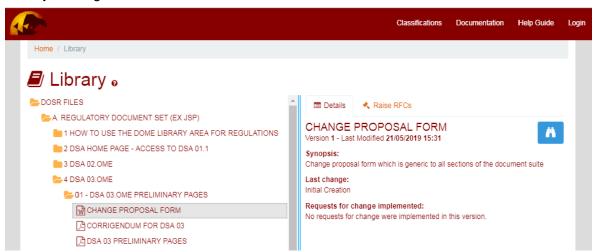


Figure 1. Change Proposal Form (Word version) Location

- 4. Any post and grammar change proposals can be approved or rejected by the DOSR PRG Authors without involvement of the associated Working Group.
- 5. Technical change proposals will need to be submitted to the associated Working Group for review and approval or rejection.
- 6. When incorporating changes care is to be taken to maintain coherence across regulations.
- 7. Changes effecting Risk to Life will be published immediately.
- 8. Other changes will be incorporated as part of routine reviews.

#### **REVIEW PROCESS**

9. The DOSR PRG team will ensure these OME Regulations remain fit for purpose by conducting reviews through the DOSR Governance Committees, involving all Stakeholders.

## **FURTHER ADVICE AND FEEDBACK**

10. The document owner is the DOSR. For further information about any aspect of this document, or questions not answered within the subsequent sections, or to provide feedback on the content, contact:

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### **AMENDMENT RECORD**

AMENDMENT RECORD  Version 1.0					
No	Section	Para	Amendment Summary	Agreed	Date
140	Section	i aia			
-	-	-	See Summary of Changes on next page	PRG2	24/02/20
	<b></b>				

#### **Summary of Changes**

This Document is a complete re-write; please see below for the summary of the changes compared to the Nov 19 edition:

- References to Standards and other publications updated throughout the chapter.
- Paragraph 1, ratified with MOD and civilian requirements, includes statement regarding operator competence.
- Paragraph 2, removed, "Category and Zoning of PES" information was removed as it is stated in Chapter 8.
- Paragraph 3, re-numbered to '2', information regarding Telemetry systems added. Information on nuclear weapon lifts was removed as it is stated in other publications.
- Paragraph 4, re-numbered to '3', wording altered to bring it in line with latest standards and government departments.
- Paragraph 5, removed, "Vehicles and Powered MHE Required To Enter Explosive Areas Without Entering a PES" this information is now stated elsewhere within this chapter.
- Paragraph 6, re-numbered to '4', "Casualty Weapons" replaced with "Munitions Involved In An Incident" and further detail added for clarification.
- Annex A, no major changes.
- Annex B, no major changes.
- Annex C, formerly "Requirements for Cat C Vehicles", now "Requirements and Management of Protected Vehicles". Note the change in terminology to 'Protected Vehicles'. The overall requirements have not drastically changed, however such MHE is now only required where unpackaged OME is to be handled.
- Annex D, new Annex, "Requirements and Management of unprotected Vehicles", this annex applies to all vehicles which handle explosives in their approved packaging.
- Annex E, signage updated to reflect change in terminology.
- Annex F, new Annex, "Unprotected Vehicle Declaration", a form which must be signed by drivers of unprotected vehicles handling MOD explosives.

# SAFETY STANDARDS AND REQUIREMENTS FOR VEHICLES, MOBILE MECHANICAL HANDLING EQUIPMENT (MHE) AND CRANES IN EXPLOSIVES FACILITIES

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### **Annexes**

- A Special Constructional Requirements for Vehicles and MHE Authorised to Enter Category A and DSEAR Zone 1/2 Areas
- B Special Constructional Requirements for Vehicles and MHE Authorised to Enter Category B and DSEAR Zone 21/22 Areas
- C Special Constructional Requirements and Management of Protected Vehicles and MHE Used to Handle Explosives
- D Constructional Requirements and Management of Unprotected Vehicles and MHE Used to Handle Explosives
- E Signage to be Affixed to Protected Vehicles and MHE Used in Explosives Areas
- F Unprotected Vehicle Declaration

## 1 VEHICLES, MOBILE MECHANICAL HANDLING EQUIPMENT (MHE) AND CRANES IN EXPLOSIVES FACILITIES

#### 1.1 Introduction

- 1.1.1 Power operated vehicles, mobile Mechanical Handling Equipment (MHE) and cranes are all possible sources of ignition. The regulations in DSA 02.0ME are prescribed to minimise risk to explosives and personnel when such equipment is used within, or close to, explosives facilities. It also details the conditions of use and standards of construction for such equipment.
- 1.1.2 The construction and use of vehicles for the transport of explosives outside of MOD property is covered in detail in DSA 03 DLSR, Movement and Transport Safety Regulations, Dangerous Goods Manual (DGM) and ADR Vol II.
- 1.1.3 Cranes and powered lifting equipment used for handling explosives or Nuclear Weapons shall comply with the requirements of JSP 467 in addition to the operating procedures set out in this document. All cranes and lifting appliances procured for use on board Royal Navy vessels and Royal Fleet Auxiliary vessels shall also conform to the requirements of Defence Standard 02-113 and DBR 3027.
- 1.1.4 BS 7121 (Code of Practice for the Safe use of Cranes) shall also be adhered to where relevant during lifting operations of WOME.
- 1.1.5 For the purposes of this Chapter the following environments are defined in the preliminary pages of DSA 03.0ME:
  - (1) Potential Explosion Site (PES)
  - (2) Process Building
  - (3) Explosive Storage Area (ESA)
  - (4) Holding Yards
  - (5) Marshalling Yards

### 1.2 Scope of Equipment Covered by This Document

- 1.2.1 The requirements set out in this document apply to cranes (and similar power-driven lifting equipment), vehicles and powered mobile MHE used to handle Explosive Substances and Articles throughout the MOD estate. This may include but is not limited to:
  - Lifting Trucks
  - Green Fleet Vehicles
  - White Fleet Vehicles
  - Emergency Vehicles
  - Private Light Goods Vehicles
  - Employee Personal Vehicles

# 1.3 Vehicles and Powered MHE Authorised To Enter an Explosives Storage Area (ESA) For The Purpose of Handling Explosives

- 1.3.1 Vehicles and powered MHE may be required to enter the ESA in order to transport and handle explosive substances and articles. These vehicles shall be inspected by a competent person prior to entering the ESA to:
  - (1) ensure that a 'gross error check' is performed.
  - (2) assess compliance with the relevant annexes of this Chapter dependent on the tasks being undertaken.
- 1.3.2 See Annex C for the requirements for vehicles used to handle explosives not in their approved packaging. These are referred to as 'Protected' vehicles and MHE.
- 1.3.3 See Annex D for the requirements for vehicles used only to handle explosives in their ESTC approved packaging. These are referred to as 'Unprotected' vehicles and MHE.
- 1.3.4 Drivers of Unprotected vehicles shall complete a copy of Annex F prior to entering the ESA.

# 1.4 Vehicles and MHE Authorised To Enter A Potential Explosion Site (PES) For The Purpose of Handling Explosives

- 1.4.1 Petrol engines are not permitted within a PES.
- 1.4.2 Diesel engines that have petrol starting systems and vehicles powered by liquid petroleum gas (LPG), butane or propane are to be treated as petrol engines and are therefore not permitted.
- 1.4.3 Notwithstanding clauses 1.6 and 1.7 below, electrically powered vehicles and MHE, diesel powered vehicles and diesel powered mobile MHE are permitted in a PES so long as they meet the requirements of section 2.
- 1.4.4 Diesel fuel is to have a flash point of not less than 55°C (see the Energy Institute IP170 for further information). Fuel and cold starting aid fluid is only to be carried in a fixed tank. No provision is to be made for the carriage of spare fuel or starting fluid.

#### 1.5 Legacy Vehicles and Mobile MHE For Use Within Category A and B Facilities

1.5.1 Vehicles and powered mobile MHE to which authority has been granted to enter Category A and B explosive facilities before 1 July 2003 can continue to be authorised for use until they are due for replacement.

### 1.6 Emergency Vehicles

1.6.1 Subject to the requirements of DSA 03.OME Part 2, Chapter 15, emergency vehicles are to be granted unimpeded access to explosives areas. During an emergency practice or exercise, the requirements this Chapter are to be complied with.

#### 1.7 Vehicles and MHE in Support of Operations

1.7.1 If there is a requirement in support of operations to use vehicles, MHE and cranes in explosives facilities that are not compliant with this Chapter then guidance and approval must be sought from the relevant IE.

#### 1.8 **Operator Competence**

1.8.1 The HOE is responsible for ensuring that all operators of vehicles and MHE used for handling explosives are suitably trained and competent. They should be aware of how the requirements of this document may impact their operating procedures.

## 1.9 Equipment Categories

1.9.1 Chapter 8 of DSA 03.0ME Part 2 categorises buildings containing explosives according to the nature of explosives stored, handled or processed in the building. Vehicles and powered MHE shall be afforded the same category as the building in which they are installed or used.

## 2 GENERAL DESIGN, CONSTRUCTION AND SPECIFICATION REQUIREMENTS FOR VEHICLES AND POWERED MHE FOR USE WITHIN A PES

#### 2.1 General

- 2.1.1 Vehicles and powered mobile MHE authorised for use within a PES are to conform, as a minimum, to the standards set out in Annexes A, B, C and D as appropriate to the task being undertaken.
- 2.1.2 It shall not be assumed that a vehicle or powered MHE compliant with Annex A (or DSEAR Zone 0, 1 2) is automatically safe for use within a Cat B, (or DSEAR Zone 20, 21, 22) environment and vice versa. It can however be assumed that a Cat A or Cat B vehicle or powered mobile MHE is safe for Cat C and Cat D environments.

#### 2.2 Identification of Protected MHE etc.

2.2.1 All Protected vehicles and mobile MHE, including Cranes etc. are to be clearly identified to define the areas within licensed facilities in which they are authorised to operate. Signage is to be in accordance with the templates shown in Annex E.

#### 2.3 Internal Combustion Engines

2.3.1 Internal combustion engines are to be Compression Ignition (CI) engines. Cold starting fluids are only to be used in a permanently installed system that injects fluid into the inlet air manifold downstream of the inlet flame arrestor. The length and bore dimensions of any cold start fluid injection jet are to be proportioned such that the jet is flameproof. Cold starting fluids are not to be used in conjunction with any electrical starting aids.

## 2.4 Tyres

- 2.4.1 Where there is a requirement to enter a processing area where a conducting/antistatic floor is installed, the tyre of at least one road wheel is to be electrically conducting in accordance with the requirements of BS ISO 2878 and DSA 03.0ME Part 2, Chapter 8.
- 2.4.2 All vehicles and MHE are to be fitted with tyres as defined in the vehicle specification/specified on vehicle rating plate.

#### 2.5 Ancillaries

2.5.1 Ancillary items in use with vehicles and powered mobile MHE are to comply with the equivalent electrical category requirements as the main equipment with which they are utilised.

#### 2.6 Electromagnetic Compatibility

2.6.1 With the exception of legacy vehicles, all vehicles and powered mobile MHE must be compliant with the requirements of BS EN 12895 (Industrial Trucks. Electromagnetic Compatibility). Documentary evidence must be provided to demonstrate compliance.

## 2.7 Telemetry Systems

2.7.1 Telemetry Systems fitted to Unprotected Vehicles and MHE, as defined by this Chapter, shall comply with the relevant requirements of DSA 03.0ME Part 2, Chapter 24. Protected vehicles, as defined by this chapter, shall not be fitted with telemetry systems containing transmitters.

## 2.8 Lifting Appliances used for Handling Conventional and Nuclear Armaments

- 2.8.1 It is the responsibility of the Technical Authority<sup>1</sup> to ensure that a lifting appliance obtained for this purpose complies with:
  - (1) The Technical requirement
  - (2) Appropriate statutory regulations and is
  - (3) Considered fit for purpose
- 2.8.2 For all Lifting Appliances it is the responsibility of the Providing Authority<sup>2</sup> to ensure that lifting appliances used for this purpose are operated, maintained and periodically tested in accordance with<sup>3</sup>:
  - (1) The original manufacturer's instructions or approved maintenance regime
  - (2) Appropriate regulations of the specific providing authority, and
  - (3) Appropriate Statutory Regulations
- 2.8.3 The Providing Authority is also responsible for the planning, organisation and control of the lifting operation. Personnel engaged in these activities are advised to consult BS 7121-1 (Code of Practice for Safe Use of Cranes) and the Lifting Operations and Lifting Equipment Regulations (LOLER).

## 2.9 Cranes not in Regular Use

- 2.9.1 All cranes not in regular use shall be subjected to a programme of pre-use checks as defined in BS 7121-1 and BS 7121-2.
- 2.9.2 Assurance shall also be obtained that cranes not in regular use are adequately maintained and that the probability of failure shall be at least equal to that which the crane would be afforded if it was subject to regular use.

## 2.10 Nuclear Weapon Lifts

2.10.1 A Nuclear Weapon lift is defined as a lift by crane or other handling equipment of an object which in being itself damaged or causing damage due to dropping or other mishap

<sup>&</sup>lt;sup>1</sup> The Technical Authority is defined as the authority responsible for the technical specification and acceptance of the lifting appliance from the manufacturer or Lease Company.

<sup>&</sup>lt;sup>2</sup> The providing authority is defined as "The owner of the Lifting Appliance, or in the specific case of Lifting Appliances hired from outside the MOD, the user of the appliance".

<sup>&</sup>lt;sup>3</sup> Approval to vary from the regulations/standards for Lifting Appliances is to be obtained from the sponsor of JSP 467, as the Competent Technical Authority, and authorised by the appropriate Inspector of Explosives (see Chapter 1).

during the lift could prejudice Nuclear Weapon safety or serviceability<sup>4</sup>. Lifts of heavy objects over, or in such close vicinity as to be in danger of coming in to contact with Nuclear Weapons, stores or transporters containing Nuclear Weapon components, Nuclear alarm monitor services etc, are included in this definition.

2.10.2 Reference shall be made to JSP 467 and ASME NOG-1 for further information on requirements for equipment performing Nuclear Weapon Lifts.

#### 2.11 Safe Working Load

2.11.1 On no account is the Safe Working Load to be exceeded in any circumstance other than those prescribed in the relevant test procedures, and then only under the supervision of a competent person.

#### 2.12 Exclusion Clause

2.12.1 These requirements do not apply to special to type equipment and Surface Support Equipment (SSE) that has been designed for and exclusively used with Strategic Weapons. Such equipment operating and maintenance procedures are to be approved for use by the Procurement Authority, the User and the appropriate Safety Authorities.

## 3 MANAGEMENT AND CONTROL OF VEHICLES AND POWERED MHE WITHIN EXPLOSIVES FACILITIES

#### 3.1 Speed Limits

3.1.1 The maximum speed limit within an explosives area for each type of vehicle and MHE is to be decided by the HoE. Speed limits are to be clearly indicated by signs or notices and are to be promulgated within local orders.

#### 3.2 Serviceability

3.2.1 No unserviceable vehicle or powered MHE is to be permitted to enter an explosives facility. Furthermore, if a fault is discovered on any vehicle or MHE during use that affects its safety, it is to be promptly withdrawn from use.

#### 3.3 Maintenance

- 3.3.1 Vehicles and powered MHE are to be maintained and periodically tested in accordance with the approved equipment maintenance schedules; rail vehicles and appliances are to be maintained in accordance with Department for Transport (DFT) requirements. The vehicle/MHE manufacturer is to provide maintenance schedules, which include the maximum performance limits and test criteria, to ensure the continuing effectiveness of any safety devices or other safety features. These schedules are to be incorporated into the maintenance schedules. Vehicles and MHE for use in both above and underground explosives facilities are to be properly maintained and periodically tested in accordance with these schedules.
- 3.3.2 Following any maintenance to the exhaust system it must be reassembled with new gaskets and tested for leaks before the MHE is put back into service. Exhaust system flame emission tests are not required during routine maintenance.

#### 3.4 Parking

3.4.1 Vehicles and mobile MHE shall only be parked in designated areas within the ESA; each site shall determine suitable parking areas. Parked vehicles loaded with explosives are

<sup>&</sup>lt;sup>4</sup> Nuclear Weapon safety and/or serviceability would be prejudiced if any event occurs which could lead to either a Nuclear Weapon incident or Nuclear Weapon accident situation.

required to be treated as a PES, in accordance with DSA 03.OME Part 2, Chapter 10, Section 1.

### 3.5 **Garaging**

3.5.1 Garaging in an ESA is not to be within the Inter Magazine Distance (IMD) of any PES.

#### 3.6 Breakdown

- 3.6.1 Should a breakdown, including failure to start readily, occur in the vicinity of a PES, the vehicle or MHE is to be off-loaded of any explosives before repairs are commenced.
- 3.6.2 In the event of a breakdown, a risk assessment shall be performed in consultation with the ESR to determine whether the vehicle / MHE shall be repaired in situ or removed from the ESA taking into consideration the ALARP principle.

#### 3.7 Modifications

3.7.1 No unauthorised modifications are to be made to any MHE.

## 3.8 Refuelling

- 3.8.1 Vehicles and MHE shall only to be refuelled at authorised above-ground refuelling points, and fuel tanks are not to be filled beyond the specified capacity. No spare fuel is to be carried.
- 3.8.2 Where refuelling points are authorised in underground sites, the fuel is to be taken underground in approved containers in sufficient quantities for one days work only.
- 3.8.3 The refuelling point is to have a floor of concrete impervious to fuel and a suitable method of spillage containment as detailed in Defence Estates, Design and Maintenance Guide No 14 (DGM 14).

### 3.9 Battery Charging

3.9.1 The batteries of electrically powered vehicles and electrically powered mobile MHE are to be maintained and charged at authorised locations in accordance with HSE Leaflet INDG139 and Defence Infrastructure Fire Standards (DIFS). After battery charging the MHE must stand for a period as determined by the MHE supplier/manufacturer, seek advice from local maintenance advisor.

#### 3.10 Fire Fighting Equipment

3.10.1 Vehicles and powered MHE are to carry fire extinguishers that are of a type suitable for the fuel used and which will also tackle electrical fires. Additional means of fire-fighting are to be available at garages, refuelling points and battery charging facilities.

#### 3.11 Ventilation

3.11.1 Where vehicles and MHE are permitted in an explosives building, adequate ventilation is to be provided to remove exhaust fumes.

## 3.12 Loading/Unloading of Vehicles

3.12.1 The engines of all load carrying road vehicles are to be switched off during loading and unloading of explosives unless the engine is required to power lifting equipment to facilitate the loading or unloading of the vehicle.

#### 4 MUNITIONS INVOLVED IN AN INCIDENT

#### 4.1 General

- 4.1.1 Munitions involved in an incident shall be subject to a local risk assessment before being moved by MHE. The MHE with the highest grade of protection available locally shall be used for moving such munitions as defined by the local risk assessment.
- 4.1.2 Any vehicle or MHE within 10m of the munition involved in the incident shall have all operating transmitters deactivated as quickly as possible.
- 4.1.3 MHE used to recover the munition shall have any operating transmitter deactivated prior to approaching the munition involved in the incident.
- 4.1.4 If necessary, advice should be sought from the weapon PT and DOSG.

#### **ANNEX A**

## SPECIAL CONSTRUCTIONAL REQUIREMENTS FOR VEHICLES AND MHE AUTHORISED TO ENTER CATEGORY A AND DSEAR ZONE 1/2 AREAS

#### 1 Introduction

1.1 Diesel and electrically powered vehicles, and mobile MHE may be authorised to enter a Cat A/DSEAR Zone 1 PES (for Category 2G vehicles), and Cat A/DSEAR Zone 2 PES (for Category 2G and 3G vehicles) subject to the restrictions detailed in this Annex.

### 2 Minimum Standards

2.1 Vehicles and mobile MHE for use in Category A and DSEAR Zones 1 & 2 are to comply with the applicable standards in Table 1 below:

BS EN 1127-1	Explosive atmospheres – Explosion prevention and protection Part 1: Basic concepts and methodology
BS EN 1175	Safety of industrial trucks – Electrical requirements
BS EN 1755	Industrial trucks. Safety requirements and verification. Supplementary requirements for operations in potentially explosive atmospheres.
BS EN 1834-1	Reciprocating Internal Combustion Engines - Safety Requirements for Design and Construction of Engines for Use in Potentially Explosives Atmospheres. Group II Engines for Use in Flammable Gas and Vapour Atmospheres
BS EN 60079	A series of standards covering electrical apparatus for use in explosive gas atmospheres
BS EN 12895	Industrial Trucks. Electromagnetic Compatibility

Table 1 – Standards for vehicles and mobile MHE for use in Cat A/DSEAR Zone 1 and Cat A/DSEAR Zone 2 areas

## 3 Additional Requirements

3.1 The maximum surface temperature of any part of the vehicle or powered mobile MHE is to be specified for the potentially explosive atmosphere that is anticipated but must not exceed T4 (135°C).

#### **ANNEX B**

## SPECIAL CONSTRUCTIONAL REQUIREMENTS FOR VEHICLES AND MHE AUTHORISED TO ENTER CATEGORY B AND DSEAR ZONE 21/22 AREAS

#### 1 Introduction

1.1 Diesel and electrically powered vehicles and mobile MHE may be authorised to enter a Cat B/DSEAR Zone 21 PES (Category 2D vehicles only) and Cat B/DSEAR Zone 22 (Category 2D and 3D vehicles only) subject to the restrictions detailed within this Annex.

### 2 Minimum Standards

Vehicles and mobile MHE for use in Category B and DSEAR Zones 21 & 22 are to comply with the applicable standards in Table 2 below:

BS EN 1127-1	Explosive atmospheres – Explosion prevention and protection – basic concepts and methodology
BS EN 1175	Safety of industrial trucks – electrical requirements
BS EN 1755	Industrial trucks. Safety requirements and verification. Supplementary requirements for operations in potentially explosive atmospheres.
BS EN 1834-3	Reciprocating internal combustion engines - Safety requirements for design and construction of engines for use in potentially explosive atmospheres. Group II engines for use in flammable dust atmospheres
BS EN 50281	Electrical apparatus for use in the presence of combustible dust. Test methods. Methods of determining minimum ignition temperatures.
BS EN 12895	Industrial trucks. Electromagnetic compatibility.

Table 2 – Standards for vehicles and powered mobile MHE for use in Cat B/DSEAR Zone 21 and 22 areas

### 3 Additional Requirements

3.1 The maximum surface temperature of any part of the vehicle or powered mobile MHE is to be specified for the potentially explosive atmosphere that is anticipated but must not exceed T4 (135°C).

#### **ANNEX C**

## SPECIAL CONSTRUCTIONAL REQUIREMENTS AND MANAGEMENT OF PROTECTED VEHICLES AND MHE USED TO HANDLE EXPLOSIVES

#### 1 Introduction

- 1.1 Diesel and electrically powered vehicles and mobile MHE which meet the requirements of this Annex are classed as 'Protected' and may therefore enter Category C and Category D areas where explosive substances and articles are not in their ESTC approved packaging.
- 1.2 Such vehicles and MHE shall be clearly marked using the label shown in Annex E, Figure 1<sup>5</sup>.

## **Constructional Requirements for Protected Vehicles and MHE**

- 1.3 Diesel and electrically powered vehicles and mobile MHE may be authorised to enter a Cat C & Cat D PES in order to handle ESTC classified explosives subject to the following restrictions:
  - (1) A spark arrestor is to be fitted to the exhaust system.
  - (2) The maximum temperature of the exposed surfaces of the vehicle or powered mobile MHE is not to exceed 135°C.
  - (3) The air intake system is to be fitted with a dry air cleaner.
  - (4) When a cold starting aid is fitted an approved flame-trap is to be fitted between the air cleaner and the cold start device.
  - (5) Electrical equipment enclosures that are accessible when the vehicle is in its normal operating condition are to provide protection against the ingress of solids and liquids to comply with the requirements of BS EN 60529.
  - (6) Electrical equipment enclosures are to withstand an impact of one joule, with the exception of light emitting parts with guards which are to withstand an impact of 0.7 joules when tested without the guard.
  - (7) The covers of the vehicle in the normal operating condition may be regarded as a satisfactory enclosure if:
    - (a) They provide protection, from the top and the sides, against contact with live or moving parts inside by tools, wires or such objects of a thickness greater than 1mm.
    - (b) They cannot be opened without keys or tools which are not normally available to the operator. Such keys or tools may be kept in a sealed container on the vehicle to allow access in an emergency.
    - (c) Electrical equipment under the covers is protected so that a 5mm diameter metal sphere cannot cause a short circuit in or between equipment or between equipment and the frame of the vehicle.

<sup>&</sup>lt;sup>5</sup> Note: This sign differs from that published in the previous version of this document. Existing signage need not be replaced but all new equipment shall use the new version of the sign.

- (8) Components which may overheat shall be fitted with a sensor arranged to warn the driver or to disconnect the relevant circuit when the maximum permissible temperature is being approached.
- (9) Wiring is to consist of single or multi-core sheathed cable, or harness; conductors are to be multi-stranded. Conductor insulation is to resist chemical attack by engine fuel, lubricating oils and hydraulic and electrolytic fluids. The wiring system may be enclosed by the structure of the vehicle in its normal operating condition provided cable entries into electrical equipment enclosures maintain the degree of protection of the enclosure.
- (10) Diesel engines must be fitted with oil pressure loss and high coolant temperatures warning devices. Alternatively, an automatic shutdown device may be fitted.
- (11) Vehicles and MHE shall be fitted with an emergency stop device which shall isolate all electrics.
- (12) EMC performance to BS EN 12895.

#### ANNEX D

## CONSTRUCTIONAL REQUIREMENTS AND MANAGEMENT OF UNPROTECTED VEHICLES AND MHE USED TO HANDLE EXPLOSIVES

#### **CONTENTS**

#### Paragraph

- 1 INTRODUCTION
- 2 THE USE OF UNPROTECTED VEHICLES
- 1 Introduction
- 1.1 Vehicles and MHE which do not meet the requirements of Annex C are classed as 'Unprotected'. It is recognised that there is a need to use such vehicles and MHE for the purpose of handling explosive substances and articles. These vehicles may be used in any Cat C or Cat D area however in order to do so, the following requirements are to be complied with:
  - (1) Explosive substances and articles shall be in their ESTC approved packaging or when the stores are loaded onto a platform.
  - (2) Vehicle/MHE shall be roadworthy in accordance with statutory civilian legislation.

### 2 The Use of Unprotected Vehicles

- 2.1 All activities of Unprotected vehicles and MHE shall be subject to the following procedural restrictions in additional to the requirements above:
  - (1) No processing of explosives is to be carried out whilst the Unprotected vehicle is performing a task within the PES.
  - (2) The Unprotected vehicle is to be utilised solely for the handling of ESTC classified explosives in their ESTC approved packaging.
  - (3) Should the Unprotected vehicle be observed to have defects then its engine is to be stopped and the explosive packages offloaded prior to its immediate removal from the explosives area.

#### **ANNEX E**

## SIGNAGE TO BE AFFIXED TO PROTECTED VEHICLES AND MHE USED IN EXPLOSIVES AREAS

## THIS EQUIPMENT IS CLASSED AS

# PROTECTED

AS DEFINED IN
DSA 03.OME PART 2 CH 16

SUBSTANCES AND ARTICLES IN ELECTRICAL
CATEGORY C & D AREAS AT ALL TIMES

#### **ANNEX F**

#### UNPROTECTED VEHICLE DECLARATION

The MOD has a Duty of Care to ensure that all equipment used to handle explosive substances and articles is safe and fit for purpose.

The Head of Establishment (HoE) of this site is required, under their duty of care, to take reasonable steps before personnel are authorised to use a vehicle for the purpose of handling explosives. They are to ensure that the vehicle is appropriate for the task (i.e. fit for purpose) and that the driver and vehicle comply with current licensing and road transport legislation. Individuals who intend to use vehicles for this purpose share responsibility for ensuring that the vehicle is fit for the purpose, and that they comply with all relevant legislative requirements.

To avoid the necessity for the HoE to check that all vehicles are fit for purpose upon entry to the establishment or prior to each use, the driver is to sign this certificate conforming that he/she is aware of his/her responsibility. This certificate is to be retained by the driver of the vehicle for the duration of the activity and is to be handed back to security staff upon leaving the establishment.

I have read and understood the regulations appertaining to the use of vehicles and MHE for use in the handling of explosive substances and articles. I acknowledge that it is my responsibility, when using said vehicle, to ensure that:

- 1. I am properly licensed to drive it.
- 2. I am competent in the operation of the vehicle/MHE for the tasks being performed.
- 3. That my use of the vehicle is covered by an appropriate insurance policy.
- 4. The vehicle is, and will be kept in a roadworthy state, complies with all relevant legal requirements, and is suitable for the task.

Signed:			
Name:			
Date:			