SAFETY RULE BOOK

FOR PERSONS IN CHARGE OF WORK ON

ELECTRICAL SYSTEMS

ASSOCIATED WITH JSP 375 VOLUME 3 CHAPTER 3

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ELECTRICAL SYSTEMS

A summary of the duties and responsibilities of Persons in Charge of work on Electrical Systems, as taken from the MoD Health & Safety Handbook JSP375 Volume 3

Full details of JSP 375 Volume 3 Chapter 3 – Electrical Systems can be found on the Defence Intranet at:

http://defenceintranetds.diiweb.r.mil.uk/sites/polestar/cs/DocumentLibrary/02/32_jsp375_vol3_chap3.pdf

or on the World Wide Web at:

http://www.mod.uk/DefenceInternet/AboutDefence/CorporatePublications/HealthandSafetyPublications/JSP375/Jsp375HealthAndSafetyHandbookVolume3.htm

Forward

The Electricity Safety Rule Book has been prepared for the benefit of all Skilled Persons Electrical involved in operating, working on or near or testing Electrical Equipment for which the Ministry of Defence is responsible. It includes extracts from the Safety Rules and Procedures, JSP 375, volume 3, chapter 3, Electricity, (hereinafter referred to as the Rules and Procedures) and is to be carried as a reference book by those persons.

The procedures included in the Rule Book are to be followed by all Skilled Persons and Persons in Charge and by trainees employed by the Ministry of Defence, or its agents, whilst such persons are operating, working on or testing Electrical Equipment which is covered by the Rules and Procedures and is within a Ministry of Defence establishment.

All persons issued with the Rule Book are to have it available for reference whenever they are operating, working on or testing Electrical Equipment which is covered by the Rules and Procedures and is within a Ministry of Defence establishment

Before starting any electrical work you should be familiar with the contents of sections 1 to 3 of this rule book and any other sections relating to equipment on which you expect to be working or testing. Any work or test identified in this rule book as requiring a permit or a sanction must not be undertaken without first consulting with the duty Authorised Person and arranging for the issue of a permit or sanction as appropriate. No electrical works shall be undertaken in a hazardous area without consultation with the duty Authorised Person regardless of the need for a permit or a sanction.

In the event of any queries or disputes with regard to the interpretation of this summary of the safety rules, the Authorised Person electrical should be consulted and reference made to the full version of the published Safety Rules and Procedures, JSP 375, volume 3, chapter 3.

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1 Personnel

Maintenance Management Organisation

1.1 The Maintenance Management Organisation is the organisation responsible for planning, organising and managing the operation, maintenance and repair of systems and equipment and may include the design and construction of new works.

Maintenance Manager

1.2 The person appointed by the Maintenance Management Organisation to be responsible for the delivery and control of site operations, maintenance and repair services.

Hazardous Area Manager

1.3 The appointed person having control of works within a Hazardous Area such as the **Explosive Safety Representative or Explosive Safety Liaison Officer or Fuels Liaison Officer.**

Area Custodian

1.4 A person appointed for a defined area or facility, which may include land or buildings and who is responsible for liaison with or control of contractors or directly employed workers. This person may be an Authorised Person of another discipline, the Hazardous Area Manager or similar person.

Authorised Person (Electrical)

1.5 The Authorised Person on duty has the prime responsibility for the practical implementation and operation of the Electricity Safety Rules and Procedures from which this Rule Book is derived.

1.6 The Authorised Person's instructions on matters relevant to these Rules are final and mandatory. In the case of a dispute between the Skilled Person and the Authorised Person, the Authorised Person is to stop the work or test.

1.7 Wherever the term Authorised Person, without any bracketed description. appears in this Rule Book, it refers to the Authorised Person (Electrical).

Authorised Person (Petroleum)

1.8 The Authorised Person (Petroleum) is the person responsible for the implementation and operation of the safety rules applicable to work within petroleum, oil and lubricant installations.

Skilled Persons and Persons in Charge

1.9 A Skilled Person is a person with sufficient technical knowledge, skills and experience to avoid any actions that may give rise to danger and to avoid any dangers which may arise in the person's working environment.

1.10 Skilled Persons shall be aware of the extent and limits of the work to be undertaken and of any constraints on the sequence or method of working.

1.11 Skilled Persons shall take reasonable care for their own and other persons' health and safety.

1.12 Skilled Persons shall take all reasonably practicable safety measures necessary to avoid danger and to prevent damage to equipment.

1.13 A Person in Charge is a Skilled Person who is working or testing in accordance with Table LV3 or who has accepted a Permit to Work, Sanction to Test, Sanction to Work on or near Live Electrical Equipment, a Specific Written Instruction or Authority for Access from the Authorised Person or a Standing Instruction from an Authorised Person.

Accompanying Safety Person

1.14 A responsible person not involved in the work or test activity, who is to contribute to the prevention of injury and who has received training in emergency first-aid and has adequate knowledge, experience and ability to recognise danger, keep watch, prevent interruption, apply first aid and summon help.

1.15 The person is to have been instructed on how to disconnect the equipment being worked on from all supplies of electricity, and how to switch off any test equipment or disconnect it from the supply.

2 Rules applicable to all work

Rule Book

2.1 This Rule Book shall be held as a reference book by all Skilled Persons electrical, working on or near, or testing electrical equipment within Ministry of Defence establishments.

Application

2.2 Skilled Persons electrical working within Ministry of Defence establishments must comply with the rules appearing in this book. The rules are based upon JSP 375 Volume 3, Chapter 3, Electricity Safety Rules and Procedures, issued by the Ministry of Defence.

2.3 These Rules do not apply where equipment has been isolated, discharged and removed from the system or installation and is not energised by other means.

Dangerous Equipment

2.4 Any electrical equipment which is considered to be in a dangerous condition is to be reported without delay to the Authorised Person, who will take appropriate action.

Dangerous Occurrences

2.5 Any occurrence that puts the Person in Charge or any other person in danger shall, without delay, be reported by the Person in Charge to the Authorised Person or, if that is not practicable, to the person supervising the work.

Locking of Switchgear and Switchrooms

2.6 Where it is necessary to avoid danger or prevent unauthorised access or operation, equipment cubicles and operating mechanisms are to be locked when the equipment is unattended.

2.7 Any room or enclosure containing high voltage equipment, a main intake switchboard, a central battery system, uninterruptible power supply equipment, a generating set or aeronautical ground lighting equipment is to be locked when unattended.

Authority for Access

2.8 An Authority for Access is issued when any work, not applicable to other electrical safety documentation, is to be undertaken in an area or location which is normally locked and is under the control of the Authorised Person. It is issued by the Authorised Person to a person of any specialism with sufficient knowledge to undertake the tasks and avoid danger.

Standing Instruction

2.9 A Standing Instruction is issued for defined tasks on a Low Voltage system or installation in non-hazardous areas and hazardous areas types Category C and Category D explosive storage areas or defined switching operations in respect of specific items of High Voltage Equipment and Low Voltage distribution Equipment.

Emergency First-Aid Training

2.10 Skilled Persons electrical who are required to act as an Accompanying Safety Person shall have received sufficient training in emergency first-aid and be familiar with the content of Annex A of this Rule Book.

Travelling First-Aid Kits

2.11 Skilled Persons electrical are required to comply with the Health and Safety (First Aid) Regulations and the Approved Code of Practice and Guidance that requires them to carry or to have access to a first aid kit.

3 Additional Rules applicable to work subject to a Permit or Sanction

Permits and Sanctions

3.1 A Permit to Work is issued by the Authorised Person to a Skilled Person when work is to be undertaken on defined items of equipment (see Tables).

3.2 A Sanction to Test is issued by the Authorised Person to a Skilled Person when particular tests are to be undertaken on defined items of equipment (see Tables). A Sanction is required when the testing involves either:

3.2.1 testing at voltages exceeding 1000 volts ac or 1500 volts dc between conductors. or exceeding 600 volts ac or 900 volts dc between a conductor and earth. or

3.2.2 the removal of temporary earths.

3.2.3 For the purpose of insulation resistance testing on installations designed in accordance with BS7671; a test voltage of 1000V dc, with a maximum test current of 1mA, does not require the issue of a Sanction To Test.

3.3 The Permit or Sanction will be accompanied by a Safety Programme, detailing the intended sequence of operations to be performed to make the equipment safe.

3.4 When the Authorised Person offers a Permit or Sanction to the Skilled Person, the Authorised Person shall:

3.4.1 explain in detail to the Skilled Person the exact extent of the work to be undertaken

3.4.2 show the Skilled Person the equipment on which the work is to be done

3.4.3 show the Skilled Person the Safety Programme

3.4.4 show the Skilled Person the safety arrangements at the points of isolation and the places of work

3.4.5 draw the attention of the Skilled Person to any special instructions and safety measures noted in Part I of the Permit or Sanction

3.4.6 demonstrate to the satisfaction of the Skilled Person that the equipment is dead and safe to work on

3.5 Before accepting the Permit or Sanction, the Skilled Person must understand the work to be undertaken, and be prepared to undertake it. The Skilled Person is to sign any special instructions or safety measures noted in Part 1 of the Permit or Sanction, and is to sign Part 2. The signature of Part 2 renders the Permit or Sanction valid for the defined work or test.

3.6 After accepting the Permit or Sanction, the Skilled Person becomes the Person in Charge and is responsible for personally supervising or undertaking the defined work. The Person in Charge is, therefore, not to leave the place where the work is being carried out, or to undertake any other work or tests while the defined work or test is in progress. During any temporary absence of the Person in Charge from the place where the work or test is being carried out, the work or test is to be suspended, and adequate safety precautions taken until work or test is resumed on the return of the Person in Charge.

Marking of Cable Boxes and other Equipment.

3.7 Where the work or test involves (or may involve) obtaining access to equipment to items of equipment over which confusion could occur such as the opening of a cable end box, the

Authorised Person shall indicate the box to the Person in Charge and identify it by temporary marking.

High Voltage Testing of Equipment

3.8 The Person in Charge and the Accompanying Safety Person are to be present throughout the duration of the tests. The Accompanying Safety Person is to have duties, as described in clause 1.14 of this rule book explained before the commencement of any testing.

3.9 Unauthorised access to the test area is to be prevented by, as a minimum, yellow and black striped tape, not less than 25mm wide, suspended on posts, and by the display of high voltage enclosure signs.

Protective Equipment

3.10 Appropriate protective equipment shall be worn or used wherever necessary to avoid danger of injury.

3.11 Protective equipment shall be inspected by the Person in Charge for visible defects on each occasion prior to use. Any suspect or defective item shall not be used.

3.12 All protective equipment used shall be suitable for the use to which it is to be put and shall be properly maintained and properly used.

Test Equipment

3.13 Test equipment shall be inspected by the user for visible defects on each occasion prior to use. Any suspect or defective item shall not be used.

Earthing Equipment

3.14 Portable earthing equipment shall be inspected by the user for visible defects on each occasion prior to use. Any suspect or defective item shall not be used.

Defective Equipment

3.15 Any defective or suspect item of protective, test, or earthing equipment shall be reported to the Authorised Person or Person in Charge of the work immediately that any defect becomes apparent and shall not be used. This clause also applies to any item for which the test certificate, or any other time limit, has expired.

4 Rules for Low Voltage Equipment in Non-Hazardous Areas (excluding AGL Primary Series Circuit Equipment)

4.1 Unless Clause 4.6 below applies, all working or testing of Low Voltage equipment connected to a system is to follow the procedures set out in LV Tables 1, 2 or 3 of this Rule Book.

4.2 Working on live electrical equipment operating at low voltage is undertaken only in exceptional circumstances; it requires a Sanction for Work on or near Live Electrical Equipment to be issued by the Authorised Person and is not discussed in this Rule Book. Inspecting, fault finding and testing of equipment operating at low voltage is allowed provided that the requirements of Clause 4.6 are followed.

4.3 Where the procedures involve the application of temporary earths, the unauthorised removal of such earths is to be prevented wherever practicable by the application of safety locks to temporary earths and padlocks to removable temporary earths.

4.4 Where work or testing in accordance with LV Tables 1, 2 or 3 of this Rule Book is to be carried out on equipment for which the means of isolation is not positively identified, the Person in Charge is to have an Accompanying Safety Person in attendance until the equipment has been isolated and proved dead. The Accompanying Safety Person is to have duties, as described in Clause 1.14 of this Rule Book explained before the commencement of any work or testing.

4.5 Voltage test indicators are to be tested immediately before and after use against a low voltage test supply. Multimeters are not to be used to prove equipment dead.

Inspecting, Fault Finding and Testing or Live Electrical Equipment

4.6 On systems and installations, including battery installations, where the supply is at low voltage testing on or near uninsulated live conductors is to be avoided, except where a formal assessment procedure for deciding whether to work live is undertaken and recorded by the Authorised Person, and reviewed and authorised by the Authorising Engineer and;

4.6.1 it is unreasonable in all circumstances for the conductors to be dead, and

4.6.2 it is reasonable in all circumstances for the persons to be at work on or near the conductor while it is live, and

4.6.3 the Authorised Person has given approval for such live working by the issue of a Standing Instruction, and

4.6.4 all live parts are adequately protected to prevent direct contact, and

4.6.5 suitable precautions (including. where necessary. The provision of suitable protective equipment) are taken to prevent injury, and

4.6.6 test equipment and all tools in use shall be suitable for the intended use. shall be properly maintained. and properly used, and

4.6.7 adequate precautions are taken to prevent damage to equipment and accidental contact with live conductors, and

4.6.8 the Person in Charge has an Accompanying Safety Person in attendance. The Accompanying Safety Person is to have the duties, as described in Clause 1.14 of this Rule Book explained before the commencement of the work.

4.7 Inspection, fault finding and testing of Equipment on systems having a supply voltage at Extra Low Voltage, inspection, fault finding, testing and topping-up battery installations that are

sectionalised in such a way that this disconnection and separation is secure and each section of batteries has a terminal voltage at Extra Low Voltage, may be undertaken, without a Sanction for Work on or near Live Electrical Equipment or Standing Instruction provided that the requirements of paragraphs 4.6.1, 4.6.2, 4.6.4,4.6.5 and 4.6.6 above are adhered to.

5 Rules for Low Voltage Equipment in Hazardous Areas

Definition

5.1 For the purposes of this Rule Book a Hazardous Area is a location in which there may be danger due to the presence of explosives, flammable dusts, flammable vapours or petroleum, oil and lubricant products.

Working in Hazardous Areas of All Types

5.2 All persons required to work on equipment in Hazardous Areas are to be familiar with, and are to comply with, these Rules, and any instructions issued by the appointed person for the Hazardous Area.

5.3 All persons required to work on equipment in Hazardous Areas are to be in possession of a Skilled Person's Certificate of Appointment appropriate to Hazardous Areas and to the equipment being worked on.

5.4 Wherever reasonably practicable, the working place is to be rendered non-hazardous for the duration of the work or test. However, the provisions of these Rules apply even if the working place has been rendered non-hazardous.

5.5 No working on or near live equipment is to be undertaken in Hazardous Areas.

5.6 Except where Clause 5.14 of this section applies, all working or testing on Low Voltage Equipment within a Hazardous Area, except for work to be undertaken within a Category C and D explosive storage facilities (non-processing), as defined by JSP482, is to be authorised by a Permit to Work (Electrical) Hazardous Area or a Sanction to Test (Electrical) Hazardous Area;. The Authorised Person (Electrical) is to follow the procedures set out in HAZ Tables 1 and 2 of this Rule Book. For work to be undertaken within a Category C or D explosive storage facility (non-processing), as defined by JSP482, the Authorised Person may alternatively issue a Standing Instruction.

5.7 Although a Permit or Sanction has been issued. the work or test shall cease immediately if the Hazardous Area Manager or Authorised Person (Petroleum) so instructs. The Person in Charge is to report such cessation of work to the Authorised Person.

5.8 Where the procedures involve the application of temporary earths, the unauthorised removal of such earths is to be prevented where practicable by fixing safety locks. Similarly, removable temporary earths are to be secured by fixing padlocks.

5.9 All tools, hand lamps and test equipment taken into a Hazardous Area, are to be of a type complying with the requirements of the Hazardous Area Manager.

5.10 Only intrinsically safe voltage test indicators are to be used to prove that equipment is dead. Indicators are to be tested against a low voltage supply immediately before being taken into the Hazardous Area. Test supply devices are not to be taken into the Hazardous Area.

5.11 High current continuity tests, prospective short circuit current tests or high voltage tests are not to be undertaken within a Hazardous Area except where required by ESTC standard No. 6:

5.11.1 In Category C and D explosive storage (non-processing) environments.

5.11.2 In Category A, B, and C (processing environments) where the environment has been Certified Free from Explosive on the Permit to Work (Explosives) by the Explosive Safety Representative.

Working in Hazardous Areas where Explosives may be Present

5.12 All work, except that defined in clause 5.6, is to be authorised by a Permit or Sanction issued by the Authorised Person and is to be undertaken in a manner which complies with these Rules and with any instructions issued by the Hazardous Area Manager.

Working in Hazardous Areas where Petroleum, Oil and Lubricant Products may be Present

5.13 Except where Clause 5.14 of this section applies. all work is to be authorised by a Permit or Sanction issued by the Authorised Person and is to be undertaken in a manner which complies with the Rules and Procedures and the Rules and Procedures for Petroleum Installations.

Rules and Procedures for Work on Petroleum Installations.

5.14 With the agreement of the Authorised Person (Petroleum) work may be undertaken in these areas without a Permit to work (Electrical), but only in the following circumstances and in accordance with the procedures laid down in HAZ Table 3.

5.14.1 where the work or inspection does not require the use of tools. instruments or apparatus. The Authorised Person (Petroleum) will co-ordinate the work with the operating authority

5.14.2 where the Authorised Person (Petroleum) issues a Hazardous Area Permit to Work (Petroleum) to the Skilled Person (Electrical). This applies within the fenced area but outside of the area classified as presenting a petroleum hazard. and is subject to the agreement of the Authorised Person (Electrical). It applies only to equipment on the load side of a main intake switch. The Authorised Person (Petroleum) will co-ordinate the work with the operating authority. Either the Authorised Person (Electrical) or the Authorised Person (Petroleum) will determine the safety procedures to be followed

5.14.3 where the Authorised Person (Petroleum) issues a Hazardous Area Permit to Work (Petroleum), supported by a Gas Free Certificate, to the Skilled Person (Electrical), and assumes control of the work. This is subject to the agreement of the Authorised Person. It applies only to equipment on the load side of a main intake switch. The Authorised Person (Petroleum) will co-ordinate the work with the operating authority. The Person in Charge is to follow the guidance given in HAZ Table 3 of this Rule Book.

Working in Hazardous Areas where other Flammable Products may be Present

5.15 All work is to be authorised by a Permit or Sanction issued by the Authorised Person and is to be undertaken in a manner which complies with these Rules and with any instructions issued by the appointed person for the Hazardous Area.

5.16 The Authorised Person will not issue the Permit or Sanction until the appointed person for the Hazardous Area has declared that the place of work is non-hazardous and will remain so for the duration of the work.

Completion of Work and Restoration of Supply

5.17 After any work is completed the Person in Charge is to check the integrity of the explosion protection of all equipment that may have been affected by the work.

5.18 Where the Person in Charge has been authorised by the issue of a Permit or Sanction (Electrical), only the Authorised Person is allowed to restore the supply to the equipment. The Authorised Person will obtain permission from the appointed person for the Hazardous Area before restoration.

5.19 Where the Person in Charge is working in accordance with sub-clause 5.14.2 or 5.14.3 of this section, on completion of the work the Person in Charge is to advise the Authorised Person (Petroleum) of the intended action and is to obtain the appointed person for the Hazardous Areas permission before restoring the supply.

6 Rules for High Voltage Equipment (excluding AGL Primary Series Circuit Equipment)

General

6.1 All working on or testing of High Voltage equipment connected to a system is to be authorised by a Permit to Work or Sanction to Test and is to follow the procedures set out in the HV Tables of this Rule Book.

6.2 The only persons who are allowed to work on, or so near any live conductor that danger may arise, are the Authorised Person and a Skilled Person acting on the instructions of the Authorised Person. The only valid reason for working near a live conductor is the use of a high voltage potential indicator.

6.3 Until equipment has been proved dead, any earth connection shall be made by means of a switch or circuit breaker.

6.4 Other forms of earth connection shall not be used until the relevant equipment and its conductors have been proved dead.

6.5 While the equipment is being proved dead, or being earthed other than by the use of a switch or circuit breaker, the Authorised Person is to have an Accompanying Safety Person in attendance. The Accompanying Safety Person is to have the duties, as described in Clause 1.14 of this Rule Book explained before the commencement of any work or test.

High Voltage Enclosures

6.6 A High Voltage Enclosure is a location within which a live high voltage conductor is or can be exposed without the use of a tool or key.

6.7 Unless Clause 6.8 applies. a high voltage enclosure is to be opened or entered only by:

6.7.1 the Authorised Person,

6.7.2 the Authorising Engineer,

6.7.3 a Skilled Person acting on the instructions of and personally supervised by the Authorised Person,

6.7.4 the Person in Charge in receipt of a Sanction to Test, when the High Voltage Enclosure is created as part of the test procedure,

6.7.5 a Skilled Person acting on the instructions of and personally supervised by the Person in Charge in receipt of a Sanction to Test, when the High Voltage Enclosure is created as part of the test procedure,

6.7.6 an Accompanying Safety Person rendering immediate assistance to the Person in Charge in connection with their safety role.

6.7.6.1 the Accompanying Safety Person who is to have the duties, as described in Clause 1.14 of this Rule Book explained before the commencement of any work or test.

6.7.7 an Authorised Person Designate or Authorising Engineer Designate acting on the instructions and personally supervised by the Authorised Person when the operation is part of the Authorised Person Designate or Authorising Engineer Designate training programme.

Live Voltage and Phasing Tests

6.8 Live voltage and phasing tests may be undertaken only by the Authorised Person, with assistance, if necessary, from a Skilled Person acting on verbal instructions from the Authorised Person. If the task is part of a safety Programme then neither a Permit to Work nor a Sanction to Test is required, but an Accompanying Safety Person is to be in attendance. If the task is not part of a Safety Programme, then the Authorised Person must issue a Specific Written Instruction. The Accompanying Safety Person is to have the duties, as described in Clause 1.14 of this Rule Book explained before the commencement of any work.

6.9 A high voltage potential indicator is to be tested immediately before and after use against a high voltage test supply.

Operation of High Voltage Switchgear

6.10 In an emergency high voltage switch gear may be switched off by any person. The person is then, with some urgency, to advise the Authorised Person of the action taken.

6.11 In normal circumstances high voltage switch gear is to be operated only by:

6.11.1 the Authorised Person,

6.11.2 a Person in Charge who has been issued with a Standing Instruction or Specific Written instruction giving authority for the operation;

6.11.3 a Skilled Person acting on the instructions and personally supervised by the Authorised Person.

6.11.4 the Person in Charge in receipt of a Sanction to Test, when the operation is part of the test procedure,

6.11.5 a Skilled Person acting on the instructions of and personally supervised by the Person in Charge in receipt of a Sanction to Test, when the operation is part of the test procedure.

6.11.6 an Authorised Person Designate or Authorising Engineer Designate acting on the instructions and under the Personal Supervision of the Authorised Person when the operation is part of the Authorised Person Designate or Authorising Engineer Designate training programme

7 Rules for Aeronautical Ground Lighting Equipment

General

7.1 The permission of the Duty Air Traffic Control Officer must be obtained before working on aeronautical ground lighting equipment. All persons working on aeronautical ground lighting equipment must be familiar with the Rules and Procedures applicable to the equipment.

7.2 When the Authorised Person issues a Permit or Sanction the Authorised Person will obtain permission for access from the Duty Air Traffic Control Officer The Authorised Person may also obtain permission for any interruption to the electrical supply, but where this has not been done, it is the responsibility of the Person in Charge to obtain such permission from the Duty Air Traffic Control Officer, as required by Clause 7.1.

7.3 When the Authorised Person does not issue a Permit or Sanction, it is the responsibility of the Person in Charge to obtain permission from the Duty Air Traffic Control Officer.

7.4 Unless Clause 7.9 applies, all work or testing on aeronautical ground lighting primary series circuit equipment connected to a system is to follow the procedures set out in the AGL Tables of this Rule Book.

7.5 Before working on or testing a luminaire, the power supply to the AGL field circuit connected to the respective series circuit transformer is to be isolated. This isolation is to precede and be augmented by local disconnection by unplugging or by other means provided by the manufacturer.

7.6 A voltage test indictor is to be tested immediately before and after use against an appropriate test supply. A multimeter or a clip ammeter is not to be used to prove equipment dead.

Primary Series Circuit Cables

7.7 Where work or testing is to be undertaken on a primary series circuit cable. the cable is to be positively identified (see para 7.10) before the Permit to Work or Sanction to Test is issued, reliance is not to be placed upon colour identification alone.

7.8 Primary series circuit cables are not to be spiked. They are to be proved dead by the use of a suitable voltage test indictor.

Power Supply Regulation Equipment

7.9 Potentiometer adjustments and setting-up procedures may be undertaken on live power supply regulation equipment without a Permit to Work provided that:

7.9.1 a suitable and sufficient written Risk Assessment has been undertaken that deems it safe to do so on the specific power supply regulation equipment and retained in the Electrical Safety Documents Register.

7.9.2 direct contact with live parts is prevented by the construction of the equipment that is suitable for the use for which it is provided and maintained in a condition suitable for that use, and is properly used and

7.9.3 test equipment and all tools in use shall be suitable for the use for which they are provided and maintained in a condition suitable for that use, and properly used.

Positive Identification of Series Circuit Cables

7.10 Prior to undertaking any work or test involving a series circuit, the Authorised Person is to positively identify the series circuit at each point of work or test by one of the methods

identified below. (When conducting these tests the series circuits are to be hand operated under local control and not by the Duty Air Traffic Control Officer.

7.10.1 The Authorised Person is to positively identify the series circuit with a clip on ammeter to at least three pre determined brilliancy levels and then observe the current drop to zero when the series circuit is switched off.

7.10.2 Where the test involves locating an open circuit, the Authorised Person is to positively identify the series circuit to be tested by eliminating all of the other series circuit cables with a clip on ammeter to at least three pre determined brilliancy levels and then observe the current drop to zero when the series circuit is switched off.

8 Working in Dangerous Locations

Definition

8.1 For the purposes of this Rule Book, a dangerous location is a place of work which presents a danger to health or in which there is a risk of injury. Locations which include a risk of fire due to the storage of explosives or of flammable material are termed Hazardous Areas and are covered by Section 5 of this Rule Book.

Example of Dangerous Locations

8.2 Many dangers exist within Ministry of Defence establishments. Examples of Dangerous Locations which may be encountered are:

i. radio frequency radiation from aerials.

ii. ionising radiation from X-Ray or radioactive sources.

iii. gases leaking from a gas store.

iv. fixed fire suppression systems (carbon dioxide, sprinkler or other).

v. confined spaces which present several hazards such as lack of ventilation, presence of noxious or explosive gases, or blockage of exit.

vi. risk of falling when working at a high level.

vii. deafening noise in machinery rooms, e.g. electricity generating sets.

Working in Dangerous Locations

8.3 Within dangerous locations the normal working rules of section 4 or 6 of this Rule Book should be followed but there will be other rules superimposed upon them to ensure safety.

8.4 Prior to entry into any dangerous location the Area Custodian for the location must be established and contacted to identify any area specific safety rules and procedures which must be complied with in addition to those appearing in this Rule Book.

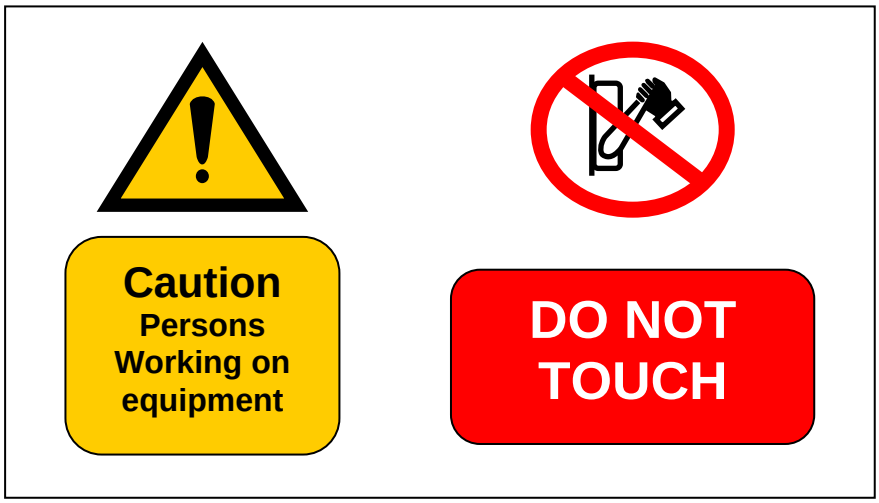
8.4.1 Prior to undertaking any work in a dangerous location the person controlling the work must satisfy themselves that the area specific safety rules and procedures adequately address the risks associated with the task and where those risks are not adequately addressed additional task specific Risks Assessments must be developed.

8.5 It is the responsibility of the person controlling the work to warn all persons of the dangers, to ensure that they are aware of the local safety rules and to ensure that correct procedures have been followed.

8.6 If a person considers that the working location is dangerous, and has not been warned and advised by the Authorised Person, the person should not commence work and should report the matter to the person supervising the work, the Area Custodian or the Authorised Person.

9 Display of Temporary Safety Signs

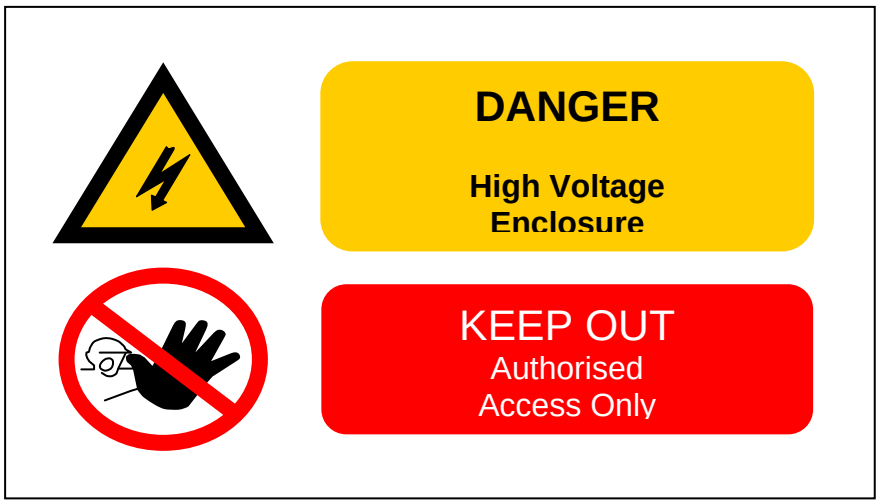
Caution Sign



9.1 Caution Signs are to be prominently displayed at points of isolation for the duration of the work.

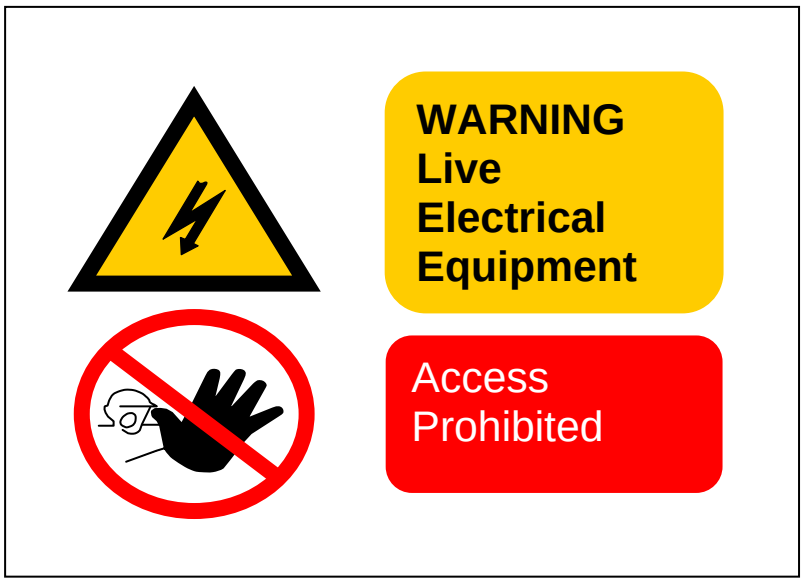
9.2 Skilled Persons may be issued, on a permanent basis, with their own Caution Signs. Such Signs shall bear the Skilled Person's name.

High Voltage Enclosure Sign



9.3 High Voltage Enclosure Signs shall be prominently displayed so that they are visible from every angle of approach to a high voltage enclosure. The signs shall be displayed before the Sanction is issued and shall remain for the duration of the tests.

Electrical Equipment Warning Sign

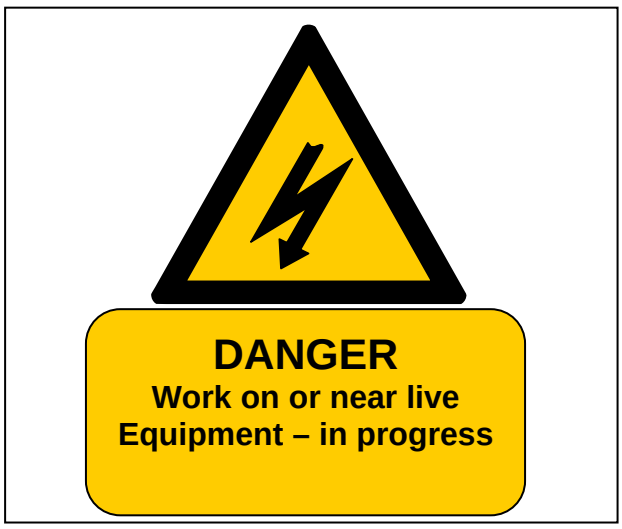


9.4 Electrical Equipment Warning Signs shall be prominently displayed on any equipment which remains live and is adjacent to the equipment to be worked on. The signs shall be displayed before any Permit or Sanction is issued and shall remain for the duration of the work.

9.5 Where work or testing is to be undertaken on any part of a multi-cubicle switchboard, Electrical Equipment Warning Signs shall be prominently displayed on the cubicles or compartments adjacent to the part being worked on or tested. If the board has rear access, Electrical Equipment Warning Signs shall similarly be displayed at both the front and rear of the board. In identifying parts at the rear of the board, reliance is not to be placed upon the switchboard labelling

9.6 Skilled Persons may be issued, on a permanent basis, with their own Electrical Equipment Warning Signs. Such signs shall bear the Skilled Person's name.

Work on or Near Live Equipment



9.7 Work on or near Live Equipment signs shall be prominently displayed on any equipment that is to be the subject of a Sanction for Work on or near Live Equipment.

10 Use of Safety Locks

10.1 Safety locks are padlocks having only one key which is different from all other keys in use. Safety locks are to be coloured red and each safety lock and its key are to be numbered for case of identification.

10.2 Before a Permit to Work is issued and before a Skilled Person commences work on low voltage equipment, safety locks are to be applied wherever practicable at the points of isolation and at temporary earths.

10.3 Before a Sanction to Test is issued, safety locks are to be applied wherever practicable at the points of isolation and at temporary earths. Removable temporary earths are to be secured with padlocks.

10.4 Where a Permit or Sanction is to be issued the keys to all the safety locks are to be placed in a safety key box and both locks of the box are to be secured. When the Permit or Sanction is issued the Authorised Person will give the Person in Charge's key to the Person in Charge and will retain the Authorised Person's key. The Person in Charge is to retain control of the keys to any padlocks securing removable temporary earths.

10.5 Safety key boxes have two locks, each of which is to have only one key one being labelled, “Safety Key Box - Person in Charge", and the other "Safety Key Box - Authorised Person". They shall be so arranged that both locks must be released before access can be gained to the contents of this Box.

10.6 The Person in Charge shall retain the Person in Charge's key until the Permit or Sanction is cancelled

10.7 Each safety key box shall contain the keys associated with only one Permit or Sanction.

10.8 When not in use, safety locks and their keys (except those covered in Clause 10.9 of this section) and the keys to the safety key box shall be kept in the working key cabinet.

10.9 All Skilled Persons electrical must possess their own safety locks and keys which shall bear their name or unique identifying number and they are to retain control of them at all times

11 Risk Assessment and Method Statements

Risk Assessments

11.1 Prior to undertaking any task on an electrical system a 'suitable and sufficient' Risk Assessment is to be produced. For tasks on an electrical system requiring isolation by an Authorised Person there will normally be a requirement for two separate Risk Assessments.

11.2 The first Risk Assessment is required to be produced by the Authorised Person to address the hazards exhibited by the system and present within the environment in which the task is to be completed. The Risk Assessment will be referred to as the Operational Risk Assessment

11.3 The purpose of the Operational Risk Assessment is to identify the risks and mitigation associated with the sequence of operations detailed within the Safety Programme. This Risk Assessment MUST also include the hazards to the individual(s) carrying out the defined sequence of operations.

11.4 The second Risk Assessment required is the Task Risk Assessment, this is to be prepared by the person(s) carrying out the task and is to include local hazard information supplied to the individual by the Area Custodian.

11.5 This second Risk Assessment will have an associated Task Method Statement that incorporates the outcome of the Task Risk Assessment into the work process. This Task Method Statement is to be sufficiently detailed to enable an assessment to be made by the Authorised Person that the task will be undertaken in a safe manner and that suitable and sufficient contingency procedures are readily available to the person(s) carrying out the task should they be required.

11.6 The Authorised Person will ensure that the Task Risk Assessment and Method Statement are produced and submitted for review prior to issuing a Permit to Work, Sanction to Test, Sanction to Work on or Near Live Equipment, Standing Instruction, or Specific Written Instruction, or Authority for Access.

11.7 The Authorised Person will review the Task Risk Assessment and determine if it is suitable and consistent with the isolation methodology as defined on the Safety Programme. If the Authorised Person considers that the Task Risk Assessment is inadequate a safety document is not to be issued and the Work or Test is not to proceed.

Annex A – Skilled Persons

Role of Skilled Persons

i. Skilled Persons are to work in accordance with the appropriate Safety Rules. Whilst so working they are to take all reasonably practicable safety measures necessary to prevent danger or, where appropriate, injury, and to prevent damage to equipment.

ii. Skilled Persons are to be aware of the extent and limits of the work to be undertaken and of any constraints on the sequence or method of working.

iii. Skilled Persons are to take reasonable care for their own and other persons' health and safety.

iv. A Skilled Person is to only work in locations or on equipment that is listed on their of Certificate of Appointment.

Role of Persons in Charge

i. A Person in Charge is to follow the Authorised Person's instructions and is to work in accordance with the appropriate Safety Rules. Whilst so working the Person in Charge is to take all reasonably practicable safety measures necessary to prevent danger or, where appropriate, injury, and to prevent damage to equipment.

ii. Unless it is unavoidable the Person in Charge is not to leave the place of work until the work or test is completed. If the Person in Charge has to temporarily leave the place of work, the work or test is to be suspended and adequate safety precautions taken to prevent danger. The work or test is not to be resumed until the Person in Charge has returned to the place of work.

iii. Having accepted a Permit or Sanction, until the work or test is completed and the Person in Charge has “signed off” the Permit or Sanction, the Person in Charge is to undertake or supervise only the specified work or test. Neither the Person in Charge, nor any person under the direct control of the Person in Charge is to attempt to undertake any other duties

Model Skilled Persons Certificate

<table>
<tr><td colspan="2">(Name of Authorising Authority)</td></tr>
<tr><td colspan="2"></td></tr>
<tr><td colspan="2">Certificate of Appointment as a Skilled person (Electrical)
This certificate is valid until the expiry date, and relates only to the electrical systems and installations listed below.

If found, please return this certificate to (name and full postal address of the Authorising Authority)</td></tr>
<tr><td colspan="2"></td></tr>
<tr><td colspan="2"></td></tr>
<tr><td colspan="2">This is to certify that;
(insert name)</td></tr>
<tr><td colspan="2">Is appointed a Skilled person (Electrical) for the installations and/or equipment listed below located at (insert site name) in accordance with, and for the purpose of the Safety Rules and Procedures (Electrical).</td></tr>
<tr><td colspan="2">Signed; (Coordinating Authorised Person)</td></tr>
<tr><td colspan="2">In the employ of;</td></tr>
<tr><td colspan="2"></td></tr>
<tr><td>Issue date;</td><td>Expiry date;</td></tr>
<tr><td colspan="2">(appointment period not to exceed three years)</td></tr>
<tr><td colspan="2">Date of last emergency first aid training;</td></tr>
<tr><td colspan="2">NOTES:</td></tr>
<tr><td colspan="2">Locations and Installations/Equipment on the site named above for which this appointment applies;</td></tr>
<tr><td colspan="2">1</td></tr>
<tr><td colspan="2">2</td></tr>
<tr><td colspan="2">3</td></tr>
<tr><td colspan="2">4</td></tr>
<tr><td colspan="2">5</td></tr>
<tr><td colspan="2">6</td></tr>
</table>

Tables

Table LV 1- For Working on Low Voltage Equipment in Non-hazardous Areas under a Permit to Work			
COLUMN 1	**COLUMN 2**	**COLUMN 3**	**COLUMN 4**
EQUIPMENT	Main intake switches, switchboards and Equipment having two or more sources of supply, cables and other Equipment on the supply side of a main intake switch.	Generating sets started by manual initiation from a remote location, or automatically on receipt of a signal.	Uninterruptible power supply Equipment.
STEP 1 PREPARE SAFETY PROGRAMME	COMPLY WITH ANY PARTICULAR SAFETY PROCEDURES APPLICABLE TO THE LOCATION. Review the planned work including any method statements and prepare (or review) the Operational Risk Assessment Prepare a Safety Programme (Electrical) and obtain a countersignature before proceeding to Step 2.		
STEP 2 ISOLATE AND FIX SIGNS	ISOLATE FROM ALL SOURCES OF SUPPLY. Where practicable, prevent unauthorised connection or unauthorised operation by fixing Safety Locks at all the points of isolation and visibly fix Caution Signs at all points of installation. Fix Caution Signs on motor starting Equipment. Fix Electrical Equipment Warning Signs on adjacent live Equipment at the places of the work.	INHIBIT ENGINE START, ISOLATE GENERATOR. Where practicable, prevent unauthorised connection, or unauthorised operation or unauthorised starting by fixing Safety Locks. Fix Caution Signs at all the points of isolation and, clearly visible, on the engine start panel. Fix Electrical Equipment Warning Signs on adjacent live Equipment at the places of the work.	ISOLATE FROM ALL SOURCES OF SUPPLY. Isolate mains supply, battery supply, output supply and any standby power supply. On parallel Uninterruptible Power Supply systems and those having an external bypass, ISOLATE the output supply terminals of the units being worked on from all sources of supply. If a battery installation is to be worked on, follow the rules applicable to Work on or near Live Equipment, disconnect the battery from its charger and disconnect the battery earth. Where practicable, prevent unauthorised connection or unauthorised operation by fixing Safety Locks at points of isolation and visibly fix Caution Signs at all points of installation Fix Electrical Equipment Warning Signs on adjacent live Equipment at the places of the work.
STEP 3 PROVE DEAD AND EARTH	ENSURE THAT THE Equipment TO BE WORKED ON IS THE Equipment THAT HAS BEEN ISOLATED Where practicable prove dead with a voltage Test Indicator at all the points of isolation and where practicable at the places of the work. Where practicable earth conductors at points of isolation and fix Safety Locks. Identify cables with certainty at the places of the work. Earth overhead lines near the places of the work.	Where practicable prove dead with a Voltage Test Indicator at all the points of isolation and where practicable at the places of the work. Where practicable, earth the line and neutral generator output terminals or conductors and, where practicable, fix Safety Locks.	Except for the battery installation, where practicable, prove dead with a voltage Test Indicator at all the points of isolation and where practicable at the places of the work. Except for the battery installation, where practicable, earth conductors at points of isolation and fix Safety Locks.

STEP 4 ISSUE PERMIT TO WORK	Review the work team's Method Statement and Task Risk Assessment prior to issuing the Permit to Work. (This may be undertaken in association with Step 1.) The Skilled Person is to be shown the diagram on the Safety Programme and the safety arrangements at all the points of isolation and at the places of the work. The Person in Charge's key to the Safety Key Box and the Permit to Work are issued to the Person in Charge. After issuing the Permit the Mimic Diagram, if installed, is adjusted, the Electrical Distribution Operating Record is completed and the original of the Safety Programme is placed with the duplicate. (Where the Authorised Person is to confirm dead in Step 5 the updating of: the Mimic Diagram; the Electrical Distribution Operating Record; and the Electrical Safety Documents Register is to be completed as soon as is practicable.)
STEP 5 CONFIRM DEAD	Where it was not practicable in Step 3 to prove the Equipment dead, the Person in Charge or Authorised Person (as appropriate), using appropriate tools, and Protective Equipment where necessary, is to Confirm Dead at the places of the work as soon as conductors have been made accessible to a Voltage Test Indicator. Where practicable, the conductors are to be earthed by the application of additional earths after they have been confirmed dead.
STEP 6 UNDERTAKE WORK	The Person in Charge is to undertake or provide Personal Supervision for the work and, on completion or when the work is stopped and made safe, returns the original Parts 1 and 2 of the Permit to Work to the Authorised Person and completes and signs Part 3.
STEP 7 CHECK WORK	If the work has been completed, check that the work is satisfactory, that the Equipment has been restored to working order and that it may be safely energised. If the work was stopped in Step 6, check that the Equipment has been made safe.
STEP 8 CANCEL PERMIT TO WORK	Cancel the Permit to Work by destroying the original Parts 1 and 2 and completing and signing Part 4. The Person in Charge's key to the Safety Key Box is returned to the Authorised Person. Where a test is required before the Equipment is energised, Steps 9 and 10 are omitted, and the procedures of Table LV2 are to be followed. Where other Permits relate to the Equipment and have not been cancelled, Steps 9 and 10 are omitted.
STEP 9 REMOVE EARTHS	Remove the Safety Locks and earths applied in Steps 3 and 5
STEP 10 MAKE EQUIPMENT OPERATIONAL	Remove the Safety Locks and Signs fixed in Step 2 and restore the Equipment to an operational state.
STEP 11 REVIEW TASK AND COMPLETE RECORDS	Adjust the Mimic Diagram if installed. Complete the Electrical Distribution Operating Record, Electrical Safety Documents Register and review task and complete the feedback report of JSP 375 Ch2 as deemed necessary.

Table LV 2 - For Testing Low Voltage Equipment in Non-hazardous Areas under a Sanction to Test			
COLUMN 1	**COLUMN 2**	**COLUMN 3**	**COLUMN 4**
EQUIPMENT	Main intake switches, switchboards and Equipment having two or more sources of supply, cables and other Equipment on the supply side of a main intake switch.	Generating sets started by manual initiation from a remote location, or automatically on receipt of a signal.	Uninterruptible power supply Equipment.
STEP 1 PREPARE SAFETY PROGRAMME	COMPLY WITH ANY PARTICULAR SAFETY PROCEDURES APPLICABLE TO THE LOCATION Review the planned test including any method statements and prepare (or review) the Operational Risk Assessment. Prepare a Safety Programme (Electrical) and obtain a countersignature before proceeding to Step 2		
STEP 2 ISOLATE AND FIX SIGNS	ISOLATE FROM ALL SOURCES OF SUPPLY. Where practicable revent unauthorised connection or unauthorised operation by fixing Safety Locks at all the points of isolation, and visibly fix Caution signs at all points of isolation. Fix Caution Signs on motor starting Equipment. Fix Electrical Equipment Warning Signs on adjacent live Equipment at the places of the test.	INHIBIT ENGINE START, ISOLATE GENERATOR. Prevent unauthorised connection, or unauthorised operation or unauthorised starting by fixing Safety Locks. Fix Caution Signs at all the points of isolation and, clearly visible, on the engine start panel. Fix Electrical Equipment Warning Signs on adjacent live Equipment at the places of the test.	ISOLATE FROM ALL SOURCES OF SUPPLY. Isolate mains supply, battery supply, output supply and any standby power supply. On parallel Uninterruptible Power Supply systems and those having an external bypass, ISOLATE the output supply terminals of the units being tested from all sources of supply. If a battery installation is to be tested, follow the rules applicable to Work on or near Live Equipment, disconnect the battery from its charger and disconnect the battery earth. Where practicable, revent unauthorised connection or unauthorised operation by fixing Safety Locks at points of isolation and fix Caution Signs at all points of isolation. Fix Electrical Equipment Warning Signs on adjacent live Equipment at the places of the test.
STEP 3 PROVE DEAD AND EARTH	ENSURE THAT THE Equipment TO BE TESTED IS THE Equipment THAT HAS BEEN ISOLATED Where practicable Prove Dead with a voltage Test Indicator at all the points of isolation and where practicable at the places of the test. Where practicable earth conductors at points of isolation and fix Safety Locks to Temporary Earth's and padlocks to Removable Temporary Earth's. Identify cables with certainty at the places of the test and at the distant end. Earth overhead lines near the	Where practicable Prove Dead with a Voltage Test Indicator at all the points of isolation and where practicable at the places of the test. Where practicable, earth the line and neutral generator output terminals or conductors and, where practicable, fix Safety Locks to Temporary Earth's and padlocks to Removable Temporary Earth's.	Except for the battery installation, where practicable, Prove Dead with a voltage Test Indicator at all the points of isolation and where practicable at the places of the test. Except for the battery installation, where practicable, earth conductors at points of isolation and fix Safety Locks to Temporary Earth's and padlocks to Removable Temporary Earth's.

	places of the test.		
STEP 4 ISSUE SANCTION TO TEST	Review the work teams Method Statement and Task Risk Assessment prior to issuing the Sanction to Test. (This may be undertaken in association with Step 1.) The Skilled Person is to be shown the diagram on the Safety Programme and the safety arrangements at all the points of isolation and at the places of the test. If a High Voltage Enclosure is to be set up, fix High Voltage Enclosure Signs and barriers. The Person in Charge's key to the Safety Key Box and the Sanction to Test are issued to the Person in Charge. After issuing the Sanction the Mimic Diagram, if installed, is adjusted, the Electrical Distribution Operating Record is completed and the original of the safety programme is placed with the duplicate. (Where the Authorised Person is to confirm dead in Step 5 the updating of: the Mimic Diagram; the Electrical Distribution Operating Record; and the Electrical Safety Documents Register is to be completed as soon as is practicable.)		
STEP5 CONFIRM DEAD	Where it was not practicable in Step 3 to prove the Equipment dead, the Person in Charge or Authorised Person (as appropriate), using appropriate tools, and Protective Equipment where necessary, is to confirm it dead at the places of the test as soon as conductors have been made accessible to a voltage Test Indicator. Where practicable, the conductors are to be earthed by the application of additional earths after they have been confirmed dead.		
STEP 6 UNDERTAKE TEST	The Person in Charge is to undertake or provide Personal Supervision for the test, including the disconnection of any Removable Temporary Earth's and additional earths. On satisfactory completion of the test, or when the test is stopped and made safe, the conductors are to be discharged and any Removable Temporary Earth's restored. The Person in Charge then returns the original Parts 1 and 2 of the Sanction to Test to the Authorised Person and completes and signs Part 3.		
STEP 7 CHECK TEST	If the test has been completed, check that the result is satisfactory, that the Equipment has been restored to working order and that it may be safely energised. If the test was stopped in Step 6, check that the Equipment has been made safe.		
STEP 8 CANCEL SANCTION TO TEST	Cancel the Sanction to Test by destroying the original Parts 1 and 2 and completing and signing Part 4. The Person in Charge's key to the Safety Key Box is returned to the Authorised Person. Where the test was stopped in Step 6 and work is required before the Equipment is re-tested, Steps 9 and 10 are omitted and the procedures of Table LV1 are to be followed.		
STEP 9 REMOVE EARTHS	Remove the locks and earths applied in Steps 3 and 5.		
STEP 10 MAKE EQUIPMENT OPERATIONAL	Remove the Safety Locks, barriers and Signs fixed in Steps 2 and 4 and restore the Equipment to an operational state.		
STEP 11 REVIEW TASK AND COMPLETE RECORDS	Adjust the Mimic Diagram if installed. Complete the Electrical Distribution Operating Record and review task and complete the feedback report of JSP 375 Ch2 as deemed necessary.		

Table LV 3 - For Skilled Persons Working on or Testing Low Voltage Equipment in Non-hazardous Areas without a Permit to Work or Sanction to Test.		
COLUMN 1	**COLUMN 2**	**COLUMN 3**
EQUIPMENT	Cables and other Equipment on the load side of a main intake switch. (For main intake switches, switchboards and Equipment having two or more sources of supply, cables and other Equipment on the supply side of a main intake switch, see Column 2 of Tables LV1 and LV2, and refer to the Authorised Person).	Generating sets started by local manual initiation. (For generating sets started by manual initiation from a remote location, or automatically on receipt of a signal, see Column 3 of Tables LV1 and LV2, and refer to the Authorised Person).
STEP 1 PREPARATION	REVIEW TASK METHOD STATEMENT AND RISK ASSESSMENT AND COMPLY WITH ANY PARTICULAR SAFETY PROCEDURES APPLICABLE TO THE LOCATION.	
STEP 2 ISOLATE AND FIX SIGNS	ISOLATE FROM ALL SOURCES OF SUPPLY. Make Equipment safe to Work on or Test. Where practicable, prevent unauthorised connection or operation by fixing Safety Locks at all the points of isolation, and fix Caution Signs at all points of isolation. Fix Caution Signs on motor starting Equipment. Fix Electrical Equipment Warning Signs on adjacent live Equipment at the places of the work or test.	INHIBIT ENGINE START, ISOLATE GENERATOR. Make Equipment safe to Work on or Test. Where practicable, prevent unauthorised connection or unauthorised operation or unauthorised starting by fixing Safety Locks. Fix Caution Signs at all the points of isolation and, clearly visible, on the engine start panel. Fix Electrical Equipment Warning Signs on adjacent live Equipment at the places of the work or test.
STEP 3 PROVE DEAD AND EARTH	ENSURE THAT THE EQUIPMENT TO BE WORKED ON OR TESTED IS THE EQUIPMENT THAT HAS BEEN ISOLATED. Where practicable Prove Dead with a Voltage Test Indicator at all the points of isolation and where practicable at the places of the work or test. Where practicable earth the line and neutral conductors and, where practicable, fix Safety Locks to Temporary Earths and padlocks to Removable Temporary Earths. Identify cables with certainty at the places of the work or, for testing, at the places of test and at the distant end.	Where practicable Prove Dead with a voltage Test Indicator at all the points of isolation and where practicable at the places of the work or test. Earth the line and neutral generator output terminals or conductors and, where practicable, fix Safety Locks to Temporary Earths and padlocks to Removable Temporary Earths.
STEP 4 CONFIRM DEAD	Where it was not practicable in Step 3 to prove the Equipment dead, the Skilled Person, using appropriate tools, and Protective Equipment where necessary, is to confirm it dead at the places of the work or test as soon as conductors have been made accessible to a Voltage Test Indicator. Where practicable, earth the line and neutral conductors unless they were earthed in Step 3.	
STEP 5 UNDERTAKE WORK OR TEST	Undertake or provide Personal Supervision for the work or test.	
STEP 6 CHECK WORK OR TEST	Check that the work or test has been satisfactorily completed, that the Equipment has been restored to working order, and that it may be safely energised.	
STEP 7 REMOVE EARTHS	Remove any earths applied in Steps 3 or 4.	
STEP 8 MAKE EQUIPMENT OPERATIONAL	Remove the Signs and Locks fixed in Step 2 and restore the Equipment to an operational state.	

Table HAZ 1 - For Working on Low Voltage Equipment in Hazardous Areas under a Permit to Work Electrical (Hazardous Area)	
COLUMN 1	**COLUMN 2**
EQUIPMENT	All Low Voltage Equipment including main intake switches and Equipment on supply and load sides, (except where Table HAZ 3 applies and excluding generating sets and uninterruptible power supplies for which Table LV1 is to be consulted).
STEP 1 PREPARE SAFETY PROGRAMME AND OBTAIN PERMISSION	COMPLY WITH ANY PARTICULAR SAFETY PROCEDURES APPLICABLE TO THE LOCATION. Review the planned work including any method statement and prepare, (or review) the Operational Risk Assessment. Prepare a Safety Programme (Electrical) and obtain a countersignature. Obtain permission from the Hazardous Area Manager on Part 1 of the Permit to Work, before proceeding to Step 2.
STEP 2 ISOLATE AND FIX SIGNS	ISOLATE FROM ALL SOURCES OF SUPPLY. Where practicable, prevent unauthorised connection or operation by fixing Safety Locks at all the points of isolation, and fix Caution Signs at all points of isolation Fix Caution Signs on motor starting Equipment. Fix Electrical Equipment Warning Signs on adjacent live Equipment at the places of the Work.
STEP 3 PROVE DEAD AND EARTH	ENSURE THAT THE EQUIPMENT TO BE WORKED ON IS THE EQUIPMENT THAT HAS BEEN ISOLATED. Where practicable Prove Dead with an intrinsically safe voltage Test Indicator at all the points of isolation and where practicable at the places of the work. Where practicable earth conductors at points of isolation, and fix Safety Locks. Identify cables with certainty at the places of the Work. In the absence of clear and certain identity, the cable is to be spiked Earth overhead lines near the places of the Work.
STEP 4 ISSUE PERMIT TO WORK	Review the work team's Method Statement and Task Risk Assessment prior to issuing the Permit to Work. (This may be undertaken in association with Step 1.)The skilled person is to be shown the diagram on the Safety Programme and the safety arrangements at all the points of isolation and at the places of the work. The Person in Charge's key to the Safety Key Box and the Permit to Work are issued to the Person in Charge. After issuing the Permit the Mimic Diagram, if installed, is adjusted, the Electrical Distribution Operating Record is completed and the original of the safety programme is placed with the duplicate. (Where the Authorised Person is to confirm dead in Step 5 the updating of: the Mimic Diagram; the Electrical Distribution Operating Record; and the Electrical Safety Documents Register is to be completed as soon as is practicable.)
STEP 5 CONFIRM DEAD	Where it was not practicable in Step 3 to prove the Equipment dead, the Person in Charge or Authorised Person (as appropriate), using appropriate tools, and Protective Equipment where necessary, is to confirm it dead at the places of the work as soon as conductors have been made accessible to an intrinsically safe voltage Test Indicator. Where practicable, the conductors are to be earthed by the application of additional earths after they have been confirmed dead.
STEP 6 UNDERTAKE WORK	The Person in is to undertake or provide Personal Supervision for the work and, on completion or when the work is stopped and made safe, checks the integrity of the explosion protection of all Equipment that may have been affected by the work, returns the original Parts 1 and 2 of the Permit to Work to the Authorised Person and completes and signs Part 3.
STEP 7 CHECK WORK	If the work has been completed, check that the work is satisfactory, that the Equipment has been restored to working order and that it may be safely energised. If the work was stopped in Step 6, check that the Equipment has been made safe. Check the integrity of the explosion protection of all Equipment that may have been affected by the Work
STEP 8 CANCEL PERMIT TO WORK	Cancel the Permit to Work by destroying the original Parts 1 and 2 and completing and signing Part 4. The Person in Charge's key to the Safety Key Box is returned to the Authorised Person.

	Part 5 of the Permit to Work is to be completed by the Hazardous Area Manager. Where a test is required before the Equipment is energised, Steps 9 and 10 are omitted, and the procedures of Table HAZ2 are to be followed.
STEP 9 REMOVE EARTHS	Remove the Safety Locks and earths applied in Steps 3 and 5
STEP 10 MAKE EQUIPMENT OPERATIONAL	Remove the Safety Locks and signs fixed in Step 2 and restore the Equipment to an operational state.
STEP 11 REVIEW TASK AND COMPLETE RECORDS	Adjust the Mimic Diagram if installed. Complete the Electrical Distribution Operating Record and review task and complete the feedback report of JSP 375 Ch2 as deemed necessary.

Table HAZ 2 - For Testing Low Voltage Equipment in Hazardous Areas under a Sanction to Test Electrical (Hazardous Area)	
COLUMN 1	**COLUMN 2**
EQUIPMENT	All Low Voltage Equipment including main intake switches and Equipment on supply and load sides, (but excluding generating sets and uninterruptible power supplies for which Table LV2 is to be consulted).
STEP 1 PREPARE SAFETY PROGRAMME AND OBTAIN PERMISSION	COMPLY WITH ANY PARTICULAR SAFETY PROCEDURES APPLICABLE TO THE LOCATION. CARRY OUT A VISUAL CHECK OF THE PROTECTIVE CONDUCTORS ASSOCIATED WITH THE CIRCUITS TO BE TESTED. Review the planned test including any method statement and prepare, (or review) the Operational Risk Assessment. Prepare a Safety Programme (Electrical) and obtain a countersignature. Obtain permission from the Hazardous Area Manager on Part 1 of the Sanction to Test, before proceeding to Step 2.
STEP 2 ISOLATE AND FIX SIGNS	ISOLATE FROM ALL SOURCES OF SUPPLY. Where practicable, prevent unauthorised connection or operation by fixing Safety Locks at all the points of isolation,and fix Caution Signs at all points of isolation. Fix Caution Signs on motor starting Equipment. Fix Electrical Equipment Warning Signs on adjacent live Equipment at the places of the Test.
STEP 3 PROVE DEAD AND EARTH	ENSURE THAT THE Equipment TO BE TESTED IS THE Equipment THAT HAS BEEN ISOLATED. Where practicable Prove Dead with an intrinsically safe voltage Test Indicator at all the points of isolation and where practicable at the places of the Test. Where practicable earth conductors at points of isolation, and fix Safety Locks to Temporary Earths and padlocks to Removable Temporary Earths. Identify cables with certainty at the places of the test and at the distant end. In the absence of clear and certain identity, the cable is to be spiked Earth overhead lines near the places of the Test.
STEP 4 ISSUE SANCTION TO TEST	Review the work team's Method Statement and Task Risk Assessment prior to issuing the Sanction to Test. (This may be undertaken in association with Step 1.) The skilled person is to be shown the diagram on the Safety Programme and the safety arrangements at all the points of isolation and at the places of the test. The Person in Charge's key to the Safety Key Box and the Sanction to Test are issued to the Person in Charge. After issuing the Sanction the Mimic Diagram, if installed, is adjusted, the Electrical Distribution Operating Record is completed and the original of the safety programme is placed with the duplicate. (Where the Authorised Person is to confirm dead in Step 5 the updating of: the Mimic Diagram; the Electrical Distribution Operating Record; and the Electrical Safety Documents Register is to be completed as soon as is practicable.)
STEP 5 CONFIRM DEAD	Where it was not practicable in Step 3 to prove the Equipment dead, the Person in Charge or Authorised Person (as appropriate), using appropriate tools, and Protective Equipment where necessary, is to confirm it dead at the places of the test as soon as conductors have been made accessible to an intrinsically safe voltage Test Indicator. Where practicable, the conductors are to be earthed by the application of additional earths after they have been confirmed dead.
STEP 6 UNDERTAKE TEST	BEFORE ANY TEST IS UNDERTAKEN CARRY OUT A VISUAL CHECK OF THE PROTECTIVE CONDUCTORS ASSOCIATED WITH THE CIRCUITS TO BE TESTED. IF THE CONDITION OF ANY OF THE PROTECTIVE CONDUCTORS APPEARS TO BE UNSATISFACTORY, THE TEST IS NOT TO PROCEED. The Person in Charge is to undertake or provide Personal Supervision for the test, including the disconnection of any Removable Temporary Earths. On satisfactory completion of the test, or when the Test is stopped and made safe, the conductors are to be discharged and any Removable Temporary Earths restored.

	The Person in Charge checks the integrity of the explosion protection of all Equipment that may have been affected by the test, returns the original Parts 1 and 2 of the Sanction to Test to the Authorised Person and completes and signs Part 3.
STEP 7 CHECK TEST	If the test has been completed, check that the result is satisfactory, that the Equipment has been restored to working order and that it may be safely energised. If the test was stopped in Step 6, check that the Equipment has been made safe. Check the integrity of the explosion protection of all Equipment that may have been affected by the Test.
STEP 8 CANCEL SANCTION TO TEST	Cancel the Sanction to Test by destroying the original Parts 1 and 2 and completing and signing Part 4. The Person in Charge's key to the Safety Key Box is returned to the Authorised Person. Part 5 of the Sanction to Test is to be completed by the Hazardous Area Manager. Where the test was stopped in Step 6 and work is required before the Equipment is re-tested, Steps 9 and 10 are omitted and the procedures of Table HAZ1 are to be followed.
STEP 9 REMOVE EARTHS	Remove the locks and earths applied in Steps 3 and 5.
STEP 10 MAKE EQUIPMENT OPERATIONAL	Remove the Safety Locks, barriers and signs fixed in Steps 2 and 4 and restore the Equipment to an operational state.
STEP 11 REVIEW TASK AND COMPLETE RECORDS	Adjust the Mimic Diagram if installed. Complete the Electrical Distribution Operating Record and review task and complete the feedback report of JSP 375 Ch2 as deemed necessary.

Table HAZ 3 - For Skilled Persons Working on Low Voltage Equipment in Hazardous Areas (Petroleum) under the immediate supervision of the Authorised Person (Petroleum) where the Authorised Person (Electrical) has not issued a Permit or Sanction.	
COLUMN 1	**COLUMN 2**
EQUIPMENT	CABLES AND OTHER EQUIPMENT ON THE LOAD SIDE OF A MAIN INTAKE SWITCH. But excluding generating sets, permanently connected uninterruptible power supply equipment and switchboards with more than one source of supply.
THE PERSON IN CHARGE IS RESPONSIBLE FOR ALL STEPS EXCEPT STEP 2 Which is undertaken by the Authorised Person (Petroleum)	
STEP 1 PREPARATION	REVIEW TASK METHOD STATEMENT AND RISK ASSESSMENT AND COMPLY WITH ANY PARTICULAR SAFETY PROCEDURES APPLICABLE TO THE LOCATION. Before starting work the prospective Person in Charge is to ensure that the work and procedure have the agreement of the Authorised Person (Electrical)
STEP 2 ISSUE PETROLEUM PERMIT	The Authorised Person (Petroleum) issues a Permit to Work (Petroleum) Hazardous Area to the Person in Charge. If the work is in an area classified as presenting a petroleum hazard, the Authorised Person (Petroleum) is to also issue a Gas Free Certificate and is to remain and personally supervise the Work.
STEP 3 ISOLATE AND FIX SIGNS	ISOLATE FROM EVERY SOURCE OF SUPPLY. Make Equipment safe to work on. Where practicable, prevent unauthorised connection or operation by fixing Safety Locks at all the points of isolation, and fix Caution Signs at all points of isolation, Fix Caution Signs on motor starting equipment. Fix Electrical Equipment Warning Signs on adjacent live equipment at the places of work.
STEP 4 PROVE DEAD AND EARTH	ENSURE THAT THE EQUIPMENT TO BE WORKED ON IS THE EQUIPMENT THAT HAS BEEN ISOLATED. Where practicable prove dead with an intrinsically safe voltage test indicator at all the points of isolation and where practicable at the working places. Where practicable earth the line and neutral conductors and, where practicable, fix Safety Locks to Temporary Earth's. Identify with certainty cables at the places of work.
STEP 5 CONFIRM DEAD	Where it was not practicable in Step 4 to prove the Equipment dead, the Person in Charge, using appropriate tools and equipment and an intrinsically safe voltage test indicator, is to confirm it dead at the places of work as soon as conductors have been made accessible. Where practicable, earth the line and neutral conductors unless they were earthed in Step 4.
STEP 6 UNDERTAKE WORK OR TEST	The Person in Charge is to undertake or provide Personal Supervision for the work or test.
STEP 7 CHECK WORK	Check that the work has been satisfactorily completed. Check the integrity of the explosion protection of all Equipment that may have been affected by the work. Check that the Equipment has been restored to working order, and that it may be safely energised.
STEP 8 REMOVE EARTHS	Remove any earth's applied in Steps 4 or 5.
STEP 9 MAKE EQUIPMENT OPERATIONAL	Remove the Signs and Locks fixed in Step 3 and restore the Equipment to an operational state.
STEP 10 RESTORE SUPPLY	Advise the Authorised Person (Petroleum) of the intended action and, before restoring the supply, obtain permission from the Hazardous Area Manager.

Table HV 1 - For Working on High Voltage Equipment under a Permit to Work			
COLUMN 1	**COLUMN 2**	**COLUMN 3**	**COLUMN 4**
EQUIPMENT	Cables, and overhead lines	Generating sets	Equipment other than cables, overhead lines and generating sets.
STEP 1 PREPARE SAFETY PROGRAMME	COMPLY WITH ANY PARTICULAR SAFETY PROCEDURES APPLICABLE TO THE LOCATION. Review planned work including any method statement and prepare, (or review) the Operational Risk Assessment. Prepare a Safety Programme (Electrical) and obtain a countersignature before proceeding to Step 2.		
STEP 2 ISOLATE AND FIX SIGNS	ISOLATE FROM ALL SOURCES OF SUPPLY. Prevent unauthorised connection or unauthorised operation by fixing Safety Locks and Caution Signs at all the points of isolation. Fix Electrical Equipment Warning Signs on adjacent live Equipment at the places of the Work.	INHIBIT ENGINE START, ISOLATE GENERATOR. Prevent unauthorised connection, or unauthorised operation or unauthorised starting by fixing Safety Locks. Fix Caution Signs at all the points of isolation and, clearly visible, on the engine start panel. Fix Electrical Equipment Warning Signs on adjacent live Equipment at the places of the Work.	ISOLATE FROM ALL SOURCES OF SUPPLY. Prevent unauthorised connection or unauthorised operation by fixing Safety Locks and Caution Signs at all the points of isolation. Fix Caution Signs on motor starting Equipment. Fix Electrical Equipment Warning Signs on adjacent live Equipment at the places of the Work.
STEP 3 PROVE DEAD	ENSURE THAT THE EQUIPMENT TO BE WORKED ON IS THE EQUIPMENT THAT HAS BEEN ISOLATED. Prove dead, with a High Voltage potential indicator, at all accessible points of isolation and, except for cables, at accessible places of the work (and, where appropriate, prove dead on the low voltage side of the transformer)).		
STEP 4 EARTH	Earth conductors at all the points of isolation and, where practicable, fix Safety Locks. Identify cables with certainty at the places of the work. In the absence of clear and certain identity, the cable is to be spiked. (See Clause 23.19) Earth overhead lines near the places of the work.	Where practicable, earth the line and neutral generator output terminals or conductors and, where practicable, fix Safety Locks.	Earth conductors at all the points of isolation and, where practicable, fix Safety Locks. Where practicable, earth conductors at the places of the work.
STEP 5 ISSUE PERMIT TO WORK	Review the work team's Method Statement and Task Risk Assessment prior to issuing the Permit to Work. (This may be undertaken in association with Step 1.) The Skilled Person is to be shown the diagram on the Safety Programme and the safety arrangements at all the points of isolation and at the places of the Work; the Person in Charge's key to the Safety Key Box and the Permit to Work are issued to the Person in Charge. After issuing the Permit the Mimic Diagram, if installed, is adjusted, the Electrical Distribution Operating Record completed and the original of the Safety Programme is placed with the duplicate. (Where the Authorised Person is to Confirm Dead in Step 6 the updating of: the Mimic Diagram; the Electrical Distribution Operating Record; and the Electrical Safety Documents Register is to be completed as soon as is practicable.)		
STEP 6 CONFIRM DEAD	Where conductors are to be exposed as part of the Work and it was not practicable to Prove Dead in Step 3, (except cables): 1. The Authorised Person is to remain with and supervise the Person in Charge until the conductors have been made accessible to a High Voltage Potential Indicator, and 2. The Authorised Person is to confirm the equipment dead to the satisfaction of the Person in charge.		
STEP 7 UNDERTAKE WORK	The Person in Charge is to undertake or provide Personal Supervision for the Work and, on completion or when the Work is stopped and made safe, returns the original Parts 1 and 2 of the Permit to Work to the Authorised Person and completes and signs Part 3.		
STEP 8 CHECK WORK	If the work has been completed, check that the Work is satisfactory, that the Equipment has been restored to working order and that it may be safely energised.		

	If the Work was stopped in Step 7, check that the Equipment has been made safe.
STEP 9 CANCEL PERMIT TO WORK	Cancel the Permit to Work by destroying the original Parts 1 and 2 and completing and signing Part 4. The Person in Charge's key to the Safety Key Box is returned to the Authorised Person. Where a test is required before the Equipment is energised, Steps 10 and 11 are omitted, and the procedures of Table HV2 are to be followed. Where other Permits relate to the Equipment and have not been cancelled, Steps 10 and 11 are omitted.
STEP 10 REMOVE EARTHS	Remove the Safety Locks and earths applied in Step 4.
STEP 11 MAKE EQUIPMENT OPERATIONAL	Remove the Safety Locks and signs fixed in Step 2 and restore the Equipment to an operational state.
STEP 12 REVIEW TASK AND COMPLETE RECORDS	Adjust the Mimic Diagram if installed. Complete the Electrical Distribution Operating Record and review task and complete the feedback report of JSP 375 Ch2 as deemed necessary.

Table HV 2 - For Testing High Voltage Equipment under a Sanction to Test			
COLUMN 1	**COLUMN 2**	**COLUMN 3**	**COLUMN 4**
EQUIPMENT	Cables, and overhead lines	Generating sets	Equipment other than cables, overhead lines and generating sets.
STEP 1 PREPARE SAFETY PROGRAMME	COMPLY WITH ANY PARTICULAR SAFETY PROCEDURES APPLICABLE TO THE LOCATION. Review the planned test including any method statement and prepare, (or review) the Operational Risk Assessment. Prepare a Safety Programme (Electrical) and obtain a countersignature before proceeding to Step 2.		
STEP 2 ISOLATE AND FIX SIGNS	ISOLATE FROM ALL SOURCES OF SUPPLY. Prevent unauthorised connection or unauthorised operation by fixing Safety Locks and Caution Signs at all the points of isolation. Fix Electrical Equipment Warning Signs on adjacent live Equipment at the places of the Test.	INHIBIT ENGINE START, ISOLATE GENERATOR. Prevent unauthorised connection, or unauthorised operation or unauthorised starting by fixing Safety Locks. Fix Caution Signs at all the points of isolation and, clearly visible, on the engine start panel. Fix Electrical Equipment Warning Signs on adjacent live Equipment at the places of the Test.	ISOLATE FROM ALL SOURCES OF SUPPLY. Prevent unauthorised connection or unauthorised operation by fixing Safety Locks and Caution Signs at all the points of isolation. Fix Caution Signs on motor starting Equipment. Fix Electrical Equipment Warning Signs on adjacent live Equipment at the places of the Test.
STEP 3 PROVE DEAD	ENSURE THAT THE EQUIPMENT TO BE TESTED IS THE EQUIPMENT THAT HAS BEEN ISOLATED. Prove dead, with a High Voltage potential indicator, at all accessible points of isolation and at the accessible places of the test (and, where appropriate, prove dead on the low voltage side of the transformer).		
STEP 4 EARTH	Where practicable, earth conductors at all the points of isolation and, where practicable fix Safety Locks to Temporary Earths and padlocks to Removable Temporary Earths. Identify cables with certainty at the places of the test and at the distant end. In the absence of clear and certain identity, the cable is to be spiked. (See clause 23.19) Earth overhead lines near the places of the Test.	Where practicable, earth the line and neutral generator output terminals or conductors and, where practicable, fix Safety Locks to Temporary Earths and padlocks to Removable Temporary Earths.	Where practicable. Earth conductors at all the points of isolation and, where practicable, fix Safety Locks to Temporary Earths and padlocks to Removable Temporary Earths. Where practicable, earth conductors at the places of the Test.
STEP 5 ISSUE SANCTION TO TEST	Review the work team's Method Statement and Task Risk Assessment prior to issuing the Sanction to Test. (This may be undertaken in association with Step 1.) The Skilled Person is to be shown the diagram on the Safety Programme and the safety arrangements at all the points of isolation and at the places of the Test. If a High Voltage Enclosure is to be set up, fix High Voltage Enclosure Signs and barriers. The Person in Charge's key to the Safety Key Box and the Sanction to Test are issued to the Person in Charge. After issuing the Sanction the Mimic Diagram, if installed, is adjusted, the Electrical Distribution Operating Record completed and the original of the safety programme is placed with the duplicate. (Where the Authorised Person is to Confirm Dead in Step 6 the updating of: the Mimic Diagram; the Electrical Distribution Operating Record; and the Electrical Safety Documents Register is to be completed as soon as is practicable.)		
STEP 6	Where conductors are to be exposed as part of the Test and it was not practicable to Prove Dead in Step		

CONFIRM DEAD	3, (except cables): 1. The Authorised Person is to remain with and supervise the Person in Charge until the conductors have been made accessible to a High Voltage Potential Indicator, and 2. The Authorised Person is to confirm the equipment dead to the satisfaction of the Person in charge.
STEP 7 UNDERTAKE TEST	The Person in Charge is to undertake or provide Personal Supervision for the Test, including the disconnection of any Removable Temporary Earths. On satisfactory completion of the Test, or when the Test is stopped and made safe, the conductors are to be discharged and any Removable Temporary Earths restored. The Person in Charge then returns the original Parts 1 and 2 of the Sanction to Test to the Authorised Person and completes and signs Part 3.
STEP 8 CHECK TEST	If the test has been completed, check that the result is satisfactory, that the Equipment has been restored to working order and that it may be safely energised. If the Test was stopped in Step 7, check that the Equipment has been made safe.
STEP 9 CANCEL SANCTION TO TEST	Cancel the Sanction to Test by destroying the original Parts 1 and 2 and completing and signing Part 4. The Person in Charge's key to the Safety Key Box is returned to the Authorised Person. Where the test was stopped in Step 7 and work is required before the Equipment is re-tested, Steps 10 and 11 are omitted and the procedures of Table HV1 are to be followed.
STEP 10 REMOVE EARTHS	Remove locks and earths applied in Step 4
STEP 11 MAKE EQUIPMENT OPERATIONAL	Remove the Safety Locks, barriers and signs fixed in Steps 2 and 5 and restore the Equipment to an operational state.
STEP 12 REVIEW TASK AND COMPLETE RECORDS	Adjust the Mimic Diagram if installed. Complete the Electrical Distribution Operating Record and review task and complete the feedback report of JSP 375 Ch2 as deemed necessary.

Table AGL 1 - For Working on Aeronautical Ground Lighting Primary Series Circuit Equipment		
COLUMN 1	**COLUMN 2**	**COLUMN 3**
EQUIPMENT	AGL Field Circuit	Primary series circuit Equipment (other than an AGL Field Circuit .
STEP 1 PREPARE A SAFETY PROGRAMME AND OBTAIN PERMISSION	COMPLY WITH ANY PARTICULAR SAFETY PROCEDURES APPLICABLE TO THE LOCATION. Review the planned work including any method statement and prepare, (or review) the Operational Risk Assessment. Prepare a Safety Programme (Electrical) and obtain a countersignature. Obtain permission from the Duty Air Traffic Control Officer in accordance with established standard MOD procedures before proceeding to Step 2. When undertaking work on a Field Circuit, the Field Circuit is to be positively identified at the point(s) of work prior to undertaking any isolation.	
STEP 2 ISOLATE AND FIX SIGNS	ISOLATE FROM ALL SOURCES OF SUPPLY. Where practicable prevent unauthorised connection or unauthorised operation by fixing Safety Locks at all the points of isolation. Fix Caution Signs at all the points of isolation. Fix Electrical Equipment Warning Signs on adjacent live Equipment at the places of the Work. (Where the point of isolation and the temporary earth are located in the same enclosure the safety lock is to be applied in Step 3.)	ISOLATE FROM ALL SOURCES OF SUPPLY. Prevent unauthorised connection or unauthorised operation by fixing Safety Locks and Caution Signs at all the points of isolation. Fix Electrical Equipment Warning Signs on adjacent live Equipment at the places of the Work. (Where the point of isolation and the temporary earth are located in the same enclosure the safety lock is to be applied in Step 3.)
STEP 3 PROVE DEAD AND EARTH	ENSURE THAT THE PRIMARY SERIES CIRCUIT CABLE TO BE WORKED ON IS THE CABLE THAT HAS BEEN ISOLATED. Prove the conductor is dead with a Voltage Test Indicator and/or Test Lamp (as applicable) at each end of the circuit. Earth the conductor at accessible points at each end of the circuit and, where practicable, fix Safety Locks. Where practicable, prove dead with voltage Test Indicator at the place(s) of the work. Primary series circuit cables are not to be spiked.	ENSURE THAT THE EQUIPMENT TO BE WORKED ON IS THE EQUIPMENT THAT HAS BEEN ISOLATED. Where practicable prove dead with a Voltage Test Indicator and/or Test Lamp (as applicable) at all the points of isolation and where practicable at the place(s) of the Work. Where practicable earth conductors at points of isolation and fix Safety Locks. Where practicable earth conductors at the place(s) of the Work.
STEP 4 ISSUE PERMIT TO WORK	Review the work team's Method Statement and Task Risk Assessment prior to issuing the Permit to Work. (This maybe undertaken in association with Step 1.) The Skilled Person is to be shown the diagram on the Safety Programme and the safety arrangements at all the points of isolation and at the places of the Work; the Person in Charge's key to the Safety Key Box and the Permit to Work are issued to the Person in Charge. After issuing the Permit, the Electrical Distribution Operating Record is completed and the original of the Safety Programme is placed with the duplicate. (Where the Authorised Person is to confirm dead in Step 5 the updating of: the Electrical Distribution Operating Record; and the Electrical Safety Documents Register is to be completed as soon as is practicable.)	
STEP 5 CONFIRM DEAD	Where conductors are to be exposed as part of the Work and it was not practicable to Prove Dead at the place(s) of work in Step 3: 1. The Authorised Person is to remain with and supervise the Person in Charge until the conductors have been made accessible, and 2. The Authorised Person is to confirm the equipment dead to the satisfaction of th Person in Charge. 3. Where practicable the conductors are to be earthed after they have been confirmed dead and, where practicable, fix safety locks.	
STEP 6	The Person in Charge is to undertake or provide Personal Supervision for the Work and, on completion or when	

UNDERTAKE WORK	the Work is stopped and made safe, returns the original Parts 1 and 2 of the Permit to Work to the Authorised Person and completes and signs Part 3.
STEP 7 CHECK WORK	If the Work has been completed, check that the work is satisfactory, that the Equipment has been restored to working order and that it may be safely energised. If the work was stopped in Step 5, check that the Equipment has been made safe.
STEP 8 CANCEL PERMIT TO WORK	Cancel the Permit to Work by destroying the original Parts 1 and 2 and completing and signing Part 4. The Person in Charge's key to the Safety Key Box is returned to the Authorised Person. Inform Duty Air Traffic Control Officer of the status of the Equipment. Where a test is required before the Equipment is energised, Steps 9 and 10 are omitted, and the procedures of Table AGL2 are to be followed. Where other Permits relate to the Equipment and have not been cancelled, Steps 9 and 10 are omitted.
STEP 9 REMOVE EARTHS	Remove the Safety Locks and earths applied in Step 3.
STEP 10 MAKE EQUIPMENT OPERATIONAL	Remove the Safety Locks and signs fixed in Step 2. Obtain permission from the Duty Air Traffic Control Officer in accordance with established MOD procedures before proceeding to restore the Equipment to an operational state.
STEP 11 REVIEW TASK AND COMPLETE RECORDS	Complete the Electrical Distribution Operating Record and review task and complete the feedback report of JSP 375 ch2 as deemed necessary.

Table AGL 2 - For Testing Aeronautical Ground Lighting Primary Series Circuit Equipment		
COLUMN 1	**COLUMN 2**	**COLUMN 3**
EQUIPMENT	AGL Field Circuit	Primary series circuit Equipment (other than an AGL Field Circuit .
STEP 1 PREPARE A SAFETY PROGRAMME AND OBTAIN PERMISSION	COMPLY WITH ANY PARTICULAR SAFETY PROCEDURES APPLICABLE TO THE LOCATION. Review the planned test including any method statement and prepare, or review) the Operational Risk Assessment. Prepare a Safety Programme (Electrical) and obtain a countersignature. Obtain permission from the Duty Air Traffic Control Officer in accordance with established standard MOD procedures before proceeding to Step 2. When testing a Field Circuit, the Field Circuit is to be positively identified at the point(s) of test prior to undertaking any isolation.	
STEP 2 ISOLATE AND FIX SIGNS	ISOLATE FROM ALL SOURCES OF SUPPLY. Where practicable prevent unauthorised connection or unauthorised operation by fixing Safety Locks at all the points of isolation. Fix Caution Signs at all the points of isolation. Fix Electrical Equipment Warning Signs on adjacent live Equipment at the places of the Test. (Where the point of isolation and the temporary earth are located in the same enclosure the safety lock is to be applied in Step 3.)	ISOLATE FROM ALL SOURCES OF SUPPLY. Prevent unauthorised connection or unauthorised operation by fixing Safety Locks and Caution Signs at all the points of isolation. Fix Electrical Equipment Warning Signs on adjacent live Equipment at the places of the Test. (Where the point of isolation and the temporary earth are located in the same enclosure the safety lock is to be applied in Step 3.)
STEP 3 PROVE DEAD AND EARTH	ENSURE THAT THE PRIMARY SERIES CIRCUIT CABLE TO BE WORKED ON IS THE CABLE THAT HAS BEEN ISOLATED. Prove Dead with Voltage Test Indicator and/or Test Lamp (as applicable) at each end of the loop. Earth the conductor at accessible points at each end of the circuit and, where practicable, fix Safety Locks to Temporary Earths and padlocks to Removable Temporary Earths. Where practicable, Prove Dead with Voltage Test Indicator at the place(s) of the Test Primary series circuit cables are not to be spiked.	ENSURE THAT THE EQUIPMENT TO BE WORKED ON IS THE EQUIPMENT THAT HAS BEEN ISOLATED. Where practicable Prove Dead with a Voltage Test Indicator and/or Test Lamp (where applicable) at all the points of isolation and where practicable at the places of the Test. Where practicable earth conductors at points of isolation and fix Safety Locks to Temporary Earths and padlocks to Removable Temporary Earths. Where practicable earth conductors at the places of the Test.
STEP 4 ISSUE SANCTION TO TEST	Review the work team's Method Statement and Task Risk Assessment prior to issuing the Sanction to Test. (This may be undertaken in association with Step 1.) The skilled person is to be shown the diagram on the Safety Programme and the safety arrangements at all the points of isolation and at the places of the Test. If a High Voltage Enclosure is to be set up, fix High Voltage Enclosure Signs and barriers. The Person in Charge's key to the Safety Key Box and the Sanction to Test are issued to the Person in Charge. After issuing the Sanction, the Electrical Distribution Operating Record is completed and the original of the Safety Programme is placed with the duplicate. (Where the Authorised Person is to confirm dead in Step 5 the updating of: the Electrical Distribution Operating Record; and the Electrical Safety Documents Register is to be completed as soon as is practicable.)	
STEP 5 CONFIRM DEAD	Where conductors are to be exposed as part of the Test and it was not practicable to Prove Dead in Step 3, : 1. The Authorised Person is to remain with and supervise the Person in Charge until the conductors have been made accessible and 2. The Authorised Person is to confirm the equipment dead to the satisfaction of the Person in Charge 3. Where practicable the conductors are to be earthed after they have been confirmed dead and, where practicable, fix Safety Locks to Temporary Earths and padlocks to Removable Temporary Earths	
STEP 6 UNDERTAKE TEST	The Person in Charge is to undertake or provide Personal Supervision for the test, including the disconnection of any Removable Temporary Earths. On satisfactory completion of the Test, or when the test is stopped and made safe, the conductors are to be	

	discharged and any Removable Temporary Earths restored. The Person in Charge then returns the original Parts 1 and 2 of the Sanction to Test to the Authorised Person and completes and signs Part 3.
STEP 7 CHECK TEST	If the test has been completed, check that the result is satisfactory, that the Equipment has been restored to working order and that it may be safely energised. If the Test was stopped in Step 6, check that the Equipment has been made safe.
STEP 8 CANCEL SANCTION TO TEST	Cancel the Sanction to Test by destroying the original Parts 1 and 2 and completing and signing Part 4. The Person in Charge's key to the Safety Key Box is returned to the Authorised Person. Inform Duty Air Traffic Control Officer of the status of the Equipment. Where the test was stopped in Step 5 and work is required before the Equipment is re-tested, Steps 9 and 10 are omitted, and the procedures of Table AGL1 are to be followed.
STEP 9 REMOVE EARTHS	Remove the Locks and earths applied in Steps 3 and 6.
STEP 10 MAKE EQUIPMENT OPERATIONAL	Remove the Safety Locks and signs fixed in Step 2. Obtain permission from the Duty Air Traffic Control Officer in accordance with established MOD procedures before proceeding to restore the Equipment to an operational state.
STEP 11 REVIEW TASK AND COMPLETE RECORDS	Complete the Electrical Distribution Operating Record and review task and complete the feedback report of JSP 375 Ch2 as deemed necessary.