

# SKAC227 (SQA Unit Code - D7K4 04)

## Carry out basic repairs to electrical and plumbing services



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### Overview

This unit is about carrying out basic electrical and plumbing repairs in the work environment. The purpose of the repair could be to:

1. carry out electrical repairs (for example changing plugs and fuses and replacing starters, tubes and lamps)
2. carry out plumbing repairs (for example replacing tap washers, ball valves, toilet seats and cistern siphons and adjusting flushing handles and gland packing nuts)
3. deal with blockages in sanitary appliances
4. deal with blockages in gullies

The unit is divided into three parts. The first part describes the four things you have to do. These are:

5. use step ladders to gain access beyond hand reach height
6. carry out basic electrical repairs
7. carry out basic plumbing repairs
8. remove blockages from waste water traps

The second part describes the knowledge and understanding you must have.

The third part gives examples and explanations of some words we use in the unit.

Please note "Candidates must be aware that working restrictions apply under the Water Supply (Water Fittings) Regulations (1999) which came into force on 1st July 1999. All connections of caravans to mains systems must comply with notification procedures unless the work is done by someone assessed to the necessary standard."

This unit is for people who carry out repairs to electrical and plumbing services as part of their normal working duties.

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### Performance criteria

*You must be able to:*

#### **Use step ladders to gain access beyond hand reach height**

- P1 check that the step ladders are safe for use
- P2 label unsafe step ladders clearly to prevent them being used
- P3 report unsafe step ladders to the right person promptly
- P4 erect and secure step ladders correctly
- P5 position step ladders on a firm and level base
- P6 meet the relevant health and safety requirements when working with and from step ladders
- P7 return the step ladders to the right place after use and store them properly

*You must be able to:*

#### **Carry out basic electrical repairs**

- P8 isolate the equipment from the electrical supply before starting repairs
- P9 warn others, as required, of the repair work being carried out
- P10 remove faulty components and dispose of them in the right place
- P11 connect cables correctly when changing plugs and fit fuses of the right rating
- P12 correctly fit starters, tubes and lamps of the correct rating
- P13 use approved methods to check that the equipment is working properly following repair
- P14 report any repairs that you are not competent to deal with to the relevant person

*You must be able to:*

#### **Carryout basic plumbing repairs**

- P15 use approved safe working practices throughout repairs
- P16 turn off the water supply if necessary before starting repairs
- P17 warn others, as required, of the repair work being carried out
- P18 remove damaged parts and fit the right replacement parts correctly
- P19 make any necessary adjustments correctly
- P20 reassemble the appliance correctly following repair
- P21 check that the appliance is working properly following repair
- P22 report any repairs that you are not competent to deal with to the relevant person

*You must be able to:*

#### **Remove blockages from waste water traps**

- P23 use approved safe working practices throughout repairs
- P24 isolate blocked sanitary ware to prevent it from being used
- P25 warn others, as required, of the repair work being carried out
- P26 use the most suitable methods for removing blockages from waste water traps
- P27 leave waste water traps free-flowing

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P28 leave sanitary ware clean and safe to use

P29 report any blockages which you cannot remove to the relevant person

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### Knowledge and understanding

*You need to know and understand:*

#### **For the whole unit**

- K1 The correct way to check that equipment is working properly following repair and the importance of carrying out the check(s)
- K2 why it is important to use approved safe working practices throughout, what these practices are and the possible consequences of failing to use them
- K3 the action that must be taken to warn others of the repair work being undertaken e.g. verbal warnings, cordons

*You need to know and understand:*

#### **Use step ladders to gain access beyond hand reach height**

- K4 the safety checks that you must carry out on step ladders before use and what might happen if you do not carry these out
- K5 what might happen if you do not label unsafe step ladders
- K6 why it is important to report unsafe step ladders promptly and who you should report these to
- K7 examples of work and working heights for which step ladders are suitable and unsuitable
- K8 how to erect and secure step ladders correctly and what might happen if you do not do this
- K9 why step ladders must be positioned on a firm and level base
- K10 what are the relevant health and safety requirements that you must meet when working with and from step ladders
- K11 the reasons why step ladders must be returned to the right place after use, and where this is

*You need to know and understand:*

#### **Carry out basic electrical repairs**

- K12 how to isolate equipment from the electrical supply and the reasons why this must be done before repairs are started
- K13 how to remove faulty components, where they should be disposed of and the possible consequences of failing to dispose of them correctly
- K14 the correct method for wiring plugs and fitting fuses, starters, tubes and lamps plumbing services
- K15 what the correct ratings are for replacement fuses, starters, tubes and lamps and the possible consequences of fitting components with the incorrect ratings

*You need to know and understand:*

#### **Carry out basic plumbing repairs**

- K16 where to turn off the water supply and whether or not it is necessary to turn it off for the types of repair being carried out
- K17 what the right replacement parts are for the repair you are doing, and why it is important that you use the right part

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K18 the correct method(s) for removing damaged parts and fitting replacement components parts

K19 what adjustments are necessary and how to make them

*You need to know and understand:*

#### **Remove blockages from waste water traps**

K20 why it is important to prevent blocked sanitary ware from being used

K21 which of the stated methods are most suitable for removing blockages from different waste water traps, and why

K22 why it is important to leave waste water traps free-flowing

K23 why it is important to leave sanitary ware clean and safe to use, and how this should be achieved

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### Additional Information

#### Scope/range related to performance criteria

1. **repairs (electrical)**
  - 1.1. changing plugs and fuses
  - 1.2. replacing starters
  - 1.3. replacing tubes
  - 1.4. replacing lamps
  
2. **repairs (plumbing)**
  - 2.1. replacement of tap washers
  - 2.2. replacement of ball valves
  - 2.3. replacement of toilet seats
  - 2.4. replacement of cistern siphons
  
3. **blockage**
  - 3.1. sanitary ware
  - 3.2. gullies
  
4. **methods**
  - 4.1. plunging
  - 4.2. rodding
  - 4.3. gulley scooping

#### Glossary

##### **Appliance**

Taps, cisterns, toilets.

##### **Damaged parts**

This would include worn parts – for example washers

##### **Isolate equipment**

Making sure the equipment is no longer connected to a mains supply, for example by unplugging the equipment or removing fuses

##### **Sanitary ware**

For example, toilets, urinals.

#### Links to other NOS

This unit links closely with SKAOSC13 and SKAOSC222.

This unit is the same as Unit CSSC74 from Asset Skills for Cleaning and Support Services.

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