

SVQ in Construction Plant Maintenance level 2

Candidate Guidance and Portfolio

Award Code: G7CA 22

Candidate name:

Publication code: Z0260

The National Occupational Standards which form the basis of this award were developed by CITB-ConstructionSkills. This document is for candidate use only and should not be used as a substitute for the National Occupational Standards.

Published by the Scottish Qualifications Authority
The Optima Building, Ironmills Road,
58 Robertson Street, Dalkeith,
Glasgow G2 8DQ Midlothian EH22 1LE

© Scottish Qualifications Authority 2009

Index

| Section | Contents | Page |
|----------------|--|-------------|
| 1 | General information about SVQs <ul style="list-style-type: none">— Introducing SVQs— Who offers SVQs?— What is the structure of an SVQ?— An example of an SVQ Element— How are SVQs achieved?— How are SVQs assessed?— Who does what in SVQs?— What is evidence?— When can simulation be used?— Integration of assessment | 3 |
| 2 | How to compile your portfolio (including worked examples) <ul style="list-style-type: none">— General information— Evidence Collection Process— Planning your portfolio— Starting your portfolio— Contents checklist— Collecting your evidence— Presenting your evidence— Referencing your evidence— Worked examples<ul style="list-style-type: none">1 – Index of evidence2 – Unit progress record3 – Element achievement record4 – Personal statement5 – Observation record6 – Witness testimony7 – Record of questions and candidate's answers | 11 |
| 3 | The Units and the recording documents for your SVQ <ul style="list-style-type: none">— The structure of the SVQs in Construction Plant Maintenance level 2— Unit Progress Record— Units— Glossary of terms | 25 |

| Section | Contents | Page |
|----------------|-----------------------------------|-------------|
| 4 | Blank recording forms | 144 |
| | — Portfolio title page | |
| | — Personal profile | |
| | — Contents checklist | |
| | — Index of evidence | |
| | — Personal statement | |
| | — Observation record | |
| | — Witness testimony | |
| | — Record of questions and answers | |
| | — Element Achievement Record | |

Section 1 — General information about SVQs

Introducing SVQs

The qualification you are undertaking is a Scottish Vocational Qualification (SVQ).

SVQs are work-based qualifications which assess the skills and knowledge people have and need to perform their job role effectively. The qualifications are designed using national occupational standards.

For each industry sector there is a Sector Skills Council (SSC) which is made up of representatives from the industry or profession and it is the SSC's responsibility to develop the national occupational standards.

These standards define what employees, or potential employees, must be able to do, how well and in what circumstances to show they are competent in their work.

The Sector Skills Council/Standards setting body for the SVQs in Construction Plant Maintenance level 2 is: CITB-ConstructionSkills

Access to SVQs is open to all and you can be assessed either against a particular Unit(s) or against the full SVQ. There are no entry requirements, no prescribed method of delivery, and no time constraints for completion or age limits.

SVQs are available at five levels of achievement which reflect the various technical and supervisory skills, knowledge, and experience which employees should have as they progress in their industry.

Who offers SVQs?

An organisation which offers SVQs is called a centre. This may be a school, college, university, employer, training provider or a combination of these. The centre has responsibility for the quality of the qualification and is required to work within an awarding body's policies and guidelines.

The Scottish Qualifications Authority (SQA) is your awarding body for this SVQ. This means that we are an organisation approved by government to design qualifications and awards. An awarding body endorses candidates' certificates so that an employer can be sure the qualification has gone through a rigorous and effective assessment process. SQA provides qualifications throughout the world and was formed by the merger of the Scottish Examinations Board (SEB) and the Scottish Vocational Education Council (SCOTVEC).

What is the structure of an SVQ?

All SVQs have a common structure and consist of standards which can be broken down into various parts:

| | |
|------------------------------------|---|
| Units and Elements | Units define the broad functions carried out in your particular job and are made up of a number of Elements . Each Element describes a specific work activity which you have to perform and may relate to skills or to the demonstration of knowledge and understanding. |
| Performance Criteria | The level and quality of how you should carry out these activities is determined by a number of statements called Performance Criteria . Performance Criteria are used to judge your competence. |
| Range/Scope Statements | A Range Statement tells you in what circumstances you must be able to prove your competence and allows you to demonstrate that you can carry out tasks in different circumstances. Items included in the range statements must not be treated as optional. Range Statements are also called scope in some National Occupational Standards. |
| Evidence Requirements | The Evidence Requirements specify the amount and type of evidence which you will need to provide to your assessor to show that you have met the standards specified in the Performance Criteria and in all the circumstances defined in the range statements. |
| Knowledge and Understanding | The section on Knowledge and Understanding states what you must know and understand and how this knowledge applies to your job. |

If you are not yet clear about how we define standards — just remember that the standards have been developed by experts within your industry or profession and that all candidates aiming for this particular SVQ are being assessed against the same standards.

You will find an example of an SVQ Element overleaf.

An example of an SVQ Element

UNIT: (1) Working safely in an engineering environment

This is the **UNIT** title — it describes a role and task.

Element 1 Comply with statutory regulations and organisational requirements

This is the **ELEMENT** title. It describes part of the main role and

Performance Criteria

You must ensure that you:

PERFORMANCE CRITERIA set out the standard of performance you need to demonstrate consistently to claim competence in

- 1 Describe your duties and obligations (as an individual) under the Health and Safety at Work Act 1974.
- 2 Comply with Statutory Regulations at all times.
- 3 Comply with organisational safety policies and procedures at all times.

Range

This means you need to cover:

- 1 Relevant sections of the Health and Safety at Work Act 1974 (eg with regard to your duties to work in a safe manner, not to interfere with remove or misuse equipment provided for the safety of yourself and others, not to endanger others by your acts or omissions).

The **RANGE** defines the various circumstances in which you must be able to prove you are competent.

You must cover all of the items in the **range** statement.

Evidence Requirements

The things you must prove that you can do:

You need to demonstrate that you understand your duties and obligations under both statutory regulations and organisational requirements and you can do this by:

- 1 Giving an adequate explanation of the duties and responsibilities of every individual as described in the Health and Safety at Work Act 1974.
- 2 Ensuring that whilst carrying out your work and/or visiting other areas of the working environment you are aware of the specific safety requirements and regulations governing your activities.

Knowledge and Understanding

You must prove that you know and understand:

- 1 The roles and responsibilities of your self and others under the Health and Safety at Work Act 1974.
- 2 The general regulations that apply to you being at work.
- 3 The specific regulations which govern your work activities.

The **KNOWLEDGE AND UNDERSTANDING** Requirements state what you must know and understand and how this knowledge applies

How are SVQs achieved?

When you consistently meet the standards described in the elements and show that you have the required skills and knowledge across the range, you can then claim that you are *competent* in each Unit. You can claim certification for single Units or whole awards. Your centre will register your claim to competence through the awarding body. The awarding body you are registered with for this SVQ is the Scottish Qualifications Authority (SQA).

Scottish Qualifications Authority
The Optima Building
58 Robertson Street
Glasgow
G2 8DQ

The process of gaining an SVQ is flexible and depends on your needs. At the beginning of the process your assessor will review your existing competence in relation to the standards and identify the most suitable SVQ. The level you start at will depend on the type and breadth of your current job role together with your past experience, skills and any relevant prior learning.

To achieve an SVQ, or a Unit of an SVQ, you must:

- ◆ Demonstrate you meet the requirements of the Performance Criteria by collecting appropriate evidence as specified by the Evidence Requirements. This evidence is assessed against the national standards by a qualified assessor, who will be allocated to you by your centre. This will usually be someone who knows you, such as a manager or supervisor.

Evidence may come from:

- ◆ the **accreditation of prior learning** — where evidence relates to past experience or achievements
- ◆ **current practice** — where evidence is generated from a current job role
- ◆ a **programme of development** — where evidence comes from assessment opportunities built into a learning/training programme whether at or away from the workplace
- ◆ a combination of these

How are SVQs assessed?

Assessment is based on what you can do and involves you, your assessor, an internal verifier and an external verifier — see ‘Who does what in SVQs’ on the following page.

You will be asked to prove you are competent by providing evidence which shows:

- ◆ you can perform all the specified tasks consistently to the required standard (**Performance Criteria**)
- ◆ you understand why you are doing things (**Knowledge and Understanding**)
- ◆ you can apply the required skills in different ways (**Range**)

Assessment is flexible and you can be certificated for each Unit you successfully achieve, even if you do not complete the full SVQ. There is no set period of time in which you need to complete a Unit. However, you and your assessor should still set target dates for completing each Unit, otherwise your qualification could go on forever. Be realistic though, as there are many factors such as your previous experience, demands within your workplace and an availability of resources which will affect how quickly you are able to achieve the qualification.

Who does what in SVQs?

A number of individuals and organisations have parts to play in SVQ assessment. Their roles have been designed to guarantee fair, accurate and consistent assessment.

| | <i>Who are they?</i> | <i>What is their role?</i> |
|----------------------------|---|---|
| Candidates | The person who wants to achieve the SVQ — in this case, you. | Need to show they can perform to national occupational standards in order to be awarded an SVQ or Unit(s). |
| Assessors* | An experienced person in the same area of work as the candidate eg supervisor. | Judge the evidence of a candidate's performance, knowledge and understanding against the national occupational standards. Decide whether the candidate has demonstrated competence. Provide guidance and support to the candidate. Assist with planning assessments, giving feedback and recording candidate progress. |
| Internal Verifiers* | Individuals appointed by an approved centre to ensure the quality of assessment within the centre. | Advise assessors and maintain the quality of assessment in a centre. Systematically sample assessments to confirm the quality and consistency of assessment decisions. |
| Approved Centres | Organisations approved by awarding bodies to coordinate assessment arrangements for SVQs. | Manage assessment on a day to day basis. Must have effective assessment practices and internal verification procedures. Must meet criteria laid down by awarding bodies and be able to provide sufficiently-competent assessors and internal verifiers. |
| External Verifiers* | Individuals appointed by the awarding body to ensure that standards are being applied uniformly and consistently across all centres offering the SVQ. | Check the quality and consistency of assessments, both within and between centres, by systematic sampling. Make regular visits to centres to ensure they still meet the criteria to deliver SVQs. |

* Assessors and internal and external verifiers are required to have occupational expertise in the SVQs which they are assessing/verifying. They must also have, or be working towards, an appropriate qualification in assessment and verification.

What is evidence?

To claim competence for an SVQ Unit you need to gather evidence which shows you have met the standards. It is important that your evidence is easily understood so that it can be checked against the standards, by both your assessor, your centre and the awarding body.

Evidence can take many forms including:

- ◆ direct observation of your performance by your assessor
- ◆ products of your work
- ◆ authenticated statement — witness testimony
- ◆ personal statement
- ◆ outcomes from questioning
- ◆ outcomes from simulation
- ◆ case studies
- ◆ assignments or projects
- ◆ Accreditation of Prior Learning (APL) — evidence from the past

It is important that your evidence is:

- ◆ **valid** — it relates to the SVQ standard you are trying to prove
- ◆ **authentic** — the evidence, or an identified part of it (eg a report) was produced by *you*
- ◆ **consistent** — achieved on more than one occasion
- ◆ **current** — usually not more than two years old
- ◆ **sufficient** — covers all the performance and knowledge requirements laid down in the standards

Your evidence may be collected through a range of sources, such as employment, voluntary work, training programmes and interests/activities which you perform outside your work. It can also be produced in various formats, eg your own reports; testimonies from colleagues, supervisors or members of the public; projects; models; audio tapes, photographs; videos.

When you first begin your SVQ, you and your assessor should identify all the Units and Elements where you can use **integration of assessment**. Further details about integration of assessment can be found on page 10.

Demonstrating knowledge, understanding and skills

In order to meet the standards, you may also be required to prove knowledge and understanding. Each Unit contains a list summarising the knowledge, understanding and skills a candidate must possess. Evidence of how these have been achieved and applied could be included in the performance evidence as one or all of the following:

- ◆ descriptions of why a particular approach was used
- ◆ personal reports about the learning process
- ◆ reflective reports which include how a theory or principle was applied
- ◆ assessment interviews
- ◆ assessment tests
- ◆ responses to questioning

These should be included in your portfolio.

How will my assessor check I have the knowledge and understanding listed in the standards?

For some Units, it will be clear to your assessor that you have the required knowledge and understanding from how you carry out your work. This is often referred to as *knowledge and understanding apparent from performance*. There will be other occasions though, when your assessor will be unsure if you know why, for example, it is important to give information to clients in certain situations. This could be because your assessor has not had the opportunity to observe all the Performance Criteria and Range during assessment. In these situations, your assessor may wish to assess your knowledge and understanding by asking you some questions. These questions can be given orally or in writing, but will be recorded in your portfolio as evidence.

Your assessor could also check you have the required level of knowledge and understanding by asking you to produce personal statements or to complete a project or assignment.

What if I have previous experience and knowledge and understanding from work and other qualifications?

If you have previous work experience, skills, and knowledge and understanding which you feel is relevant to your SVQ, you should tell your assessor about it. Your assessor may ask you for more proof in the form of letters from previous employers/training providers or details about any courses you have completed.

For example, you may have achieved an HNC in a relevant subject in which case your assessor may feel that you already have some of the knowledge and understanding required for the SVQ.

The process of matching your previous experience and learning is often referred to as the Accreditation of Prior Learning (APL). The purpose of this process is to try and give you some credit towards your SVQ for things you can already do to the national standard. Your assessor judges the evidence available and matches it against the requirements of the SVQ. This means that your assessor should not have to assess you for these things all over again.

However, the success of this process depends on *you* telling *your assessor* what previous work experience or knowledge and understanding you have and how you think it is relevant to your SVQ. The more information you can supply to support your claims, the easier it should be to convince your assessor that you are competent.

When can simulation be used?

Throughout your SVQ, the emphasis is on you being able to carry out real work activities so assessment will normally be carried out in the workplace itself.

There may be times, however, when it might not be appropriate for you to be assessed while you are working. For example your SVQ might require you to carry out emergency or contingency procedures (for safety or confidentiality reasons) or your job role may not cover all aspects of the qualification. In such instances, when you have no other means of generating evidence, **simulation** might be appropriate.

Simulation is any structured exercise involving a specific task which reproduces real-life situations. Care must be taken though to ensure that the conditions in which you are assessed *exactly* mirror the work environment ie it is a **realistic working environment**.

You and your assessor should check the assessment strategy for your SVQ carefully to find out the Sector Skills Council (SSC's) view of what constitutes a realistic working environment. Some SSC's stipulate the specific elements which are suitable for this approach.

Integration of assessment

It is not necessary for you to have each Element assessed separately — doing so could result in assessment which takes too long and places too great a burden on you and your assessor.

There will be instances when you will be able to use one piece of evidence to prove your competence across different Elements or Performance Criteria. You may even find that evidence is relevant for different Units — this is called **integration of assessment**.

When you first begin your SVQ, you and your assessor will spend time looking at the standards, planning how much time you are both able to devote to the qualification and drawing up an action plan.

At this stage, you should identify any activities which relate to more than one Unit or Outcome and arrange for the best way to collect a single piece of evidence which satisfactorily covers all the Performance Criteria.

If you are going to integrate assessments, make sure that the evidence is cross-referenced to the relevant Units. Details of how to cross reference your evidence can be found in Section 2 'How to compile your portfolio'.

Section 2 — How to compile your portfolio (including worked examples)

General information

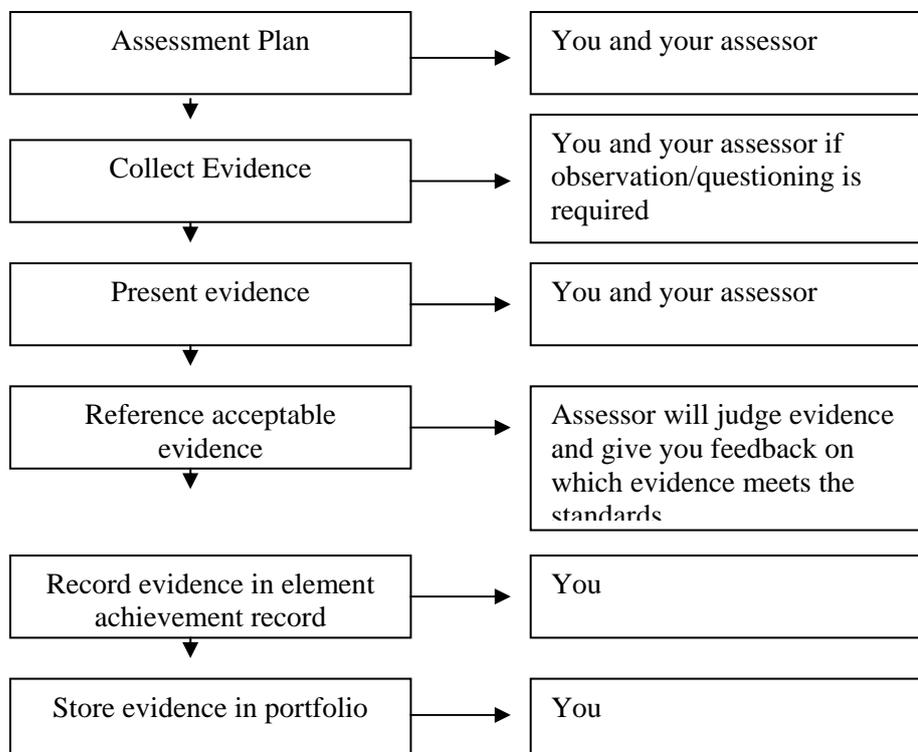
A portfolio, like a log book, is a way of recording evidence of your achievements. It is a collection of different items of evidence which indicates that you have the required skills, knowledge and understanding to support your claim to a qualification.

The production of a well-organised, clearly labelled portfolio which relates each piece of evidence to the relevant Outcomes and Performance Criteria requires a careful methodical approach. When your assessor looks through your portfolio, they will find the task of making judgements about your competence much easier if the information in it is presented in a logical sequence.

You will need to present your evidence in a format that is easy to read and in which materials can be added or taken away. This section gives suggestions on how to lay out and present your evidence and includes worked examples. There are also forms and matrices which will assist you to chart your progress through the award.

You do not have to lay out your evidence in the way suggested but you may find it helpful to do so. Each portfolio will be different in content but all should include information about you (the candidate), the organisation where you are undertaking your qualification, the assessor and so on.

Evidence Collection Process



Planning your portfolio

Start by carefully reading through the standards and, together with your assessor, decide which Units you might like to work on first. You do not have to do the Units in order. There may be some Units that relate to tasks which you carry out on a regular basis, therefore making it easier to collect evidence right away. Alternatively, there may be activities in other Units which you only undertake now and again, these can be left until the opportunity arises for you to collect evidence.

Before you start looking for different kinds of evidence and deciding if they should be included in your portfolio, you will find it helpful to plan how you will carry out the tasks and how long they are going to take.

The plan is usually referred to as an '**assessment plan**'. It should be produced in discussion with your assessor and will set out the different stages in developing your portfolio. You will probably want to produce a plan for each Unit.

It is unlikely that you will be able to complete all of the Units straight away and you should therefore think about starting with those Units where you have a lot of experience and in which you work well. You should also remember to identify any opportunities for **integration of assessment**.

We have provided you with a '**Unit progress record**' — see Example 2. Each time you complete a Unit, your assessor should sign and date the relevant section on the form. At this stage, it might be a good idea to check that all your evidence and recording documents have been completed correctly and can easily be located. You can then circle the reference number of that Unit in the checkboxes at the top of the form so that you can see at a glance what stage you are at in your SVQ.

Starting your portfolio

Make sure that you clearly label your portfolio (or disk if you are recording your evidence electronically) with your name together with the title and level of the award.

Your portfolio will need a *title page* and a *contents page*. You should also complete a *Personal Profile* which records details about yourself and your job as well as providing information about your employer, training provider or college. Blank samples of these forms are provided in Section 4.

We recommend that you compile your portfolio in the following order:

| |
|--|
| Title Page |
| Contents Checklist |
| Personal Profile |
| Unit Progress Record |
| Completed Element Achievement Records |
| Index of Evidence |
| Pieces of evidence |
| Glossary of terms |
| Standards |

Contents checklist

You might also find it useful to complete the following checklist as you work your way through your portfolio. This will help you to see if you have included all the relevant items. Once you have completed your portfolio, you will be able to use this checklist again as a contents page, by inserting the relevant page or section numbers in the right hand column.

| | Completed? | Page/Section number |
|--|--------------------------|---------------------|
| Title page for the portfolio | <input type="checkbox"/> | |
| Personal profile | | |
| ◆ your own personal details | <input type="checkbox"/> | |
| ◆ a brief CV or career profile | <input type="checkbox"/> | |
| ◆ description of your job | <input type="checkbox"/> | |
| ◆ information about your employer/training provider/college | <input type="checkbox"/> | |
| Unit Assessment Plans | <input type="checkbox"/> | |
| Unit progress record | <input type="checkbox"/> | |
| Completed Element Achievement Records for each Unit | | |
| ◆ signed by yourself, your assessor and the internal verifier (where relevant) | <input type="checkbox"/> | |
| ◆ Evidence reference numbers included | <input type="checkbox"/> | |
| Index of evidence (with cross-referencing information completed) | <input type="checkbox"/> | |
| Evidence (with reference numbers) | | |
| ◆ observation records | <input type="checkbox"/> | |
| ◆ details of witnesses (witness testimony sheets) | <input type="checkbox"/> | |
| ◆ personal statements | <input type="checkbox"/> | |
| ◆ products of performance | <input type="checkbox"/> | |

Collecting your evidence

All of the evidence which you collect and present for assessment must be relevant to your SVQ. Your assessor will help you choose which pieces of evidence you should include.

We have provided blank forms in Section 4 of this document, which you can photocopy to help you record and present your evidence. Although we have provided you with sample forms, your centre may have their own recording documents which they would prefer you to use.

Some of these forms eg **observation records** and the **record of questions and answers**, will be completed by your assessor. Other forms (**witness testimonies**) will be used by people other than your assessor to testify that they have observed you doing your job, and there is one for you to complete called a **personal statement**.

Explanations are given below about how and when these forms should be used.

Observation record (Example 5)

The observation record is used by your assessor to record what tasks you have performed and to what standard. There is also a section for your assessor to note which other Units or Outcomes are covered by this evidence ('integration of assessment').

The assessor will discuss with you which Performance Criteria and Range you have successfully achieved and give you feedback. This form should then be given a reference number and included in your portfolio as part of your evidence.

Witness testimony (Example 6)

There may be occasions when your assessor is not available to observe you carrying out certain aspects of your job. In such instances, it may be appropriate for another person to comment about your performance by completing a statement called a 'witness testimony'.

Witness testimony should only be used as supporting evidence and should:

- ◆ be provided by a person, not related to you, who is in a position to make a valid comment about your performance eg supervisor, line manager or possibly a client/customer
- ◆ contain comments which specifically relate your performance to the standards
- ◆ be authenticated by the inclusion of the witness's signature, role, address, telephone number and the date

It is unlikely that your assessor would make an assessment decision based on witness testimony alone. They would normally supplement this type of evidence with questioning.

Record of questions and candidate's answers (Example 7)

This form is used to record any questions which your assessor may ask, to establish whether you have the required level of Knowledge and Understanding associated with each Unit. There is also space on the form for your answers to be noted.

Personal statement (Example 4)

There will be times when you need to put a piece of your evidence in context for your assessor so that they can decide if it is relevant to your SVQ. You can complete personal statements to help you do this — these can relate either to the pieces of evidence or to each Outcome or Unit.

For example, you may refer to paperwork which is often used in your organisation to help you pass on information to a colleague. It may not be clear to an assessor why you are communicating to your colleague in this way and a **brief** explanation of the paperwork and why it is relevant to a particular part of your SVQ may be required.

A personal statement might also be used to record your experience of something, such as, how you handled a specific situation. This can be documented in your personal statement and should be a description of what you did, how you did it and why you did it. It will also allow you to include the people who were present and either assisted you or witnessed your actions. This, in turn, might identify who you should approach for ‘witness testimony’. In your personal statement you could also refer to product evidence that you have produced (eg reports, notes, completed forms), these can also be included as evidence in your portfolio.

The personal statement can be a piece of evidence in itself and should therefore be included in your portfolio.

Presenting your evidence

It is important to present all of your evidence in a clear, consistent and legible manner. Your assessor will then find it much easier to make appropriate judgements about the quality, sufficiency and currency of the materials you are putting forward for consideration.

It is not necessary to produce all of your evidence in typewritten format — some hand-written pieces of evidence, such as notes, will be perfectly acceptable.

There may also be items of evidence which you cannot physically include in your portfolio. This might be for confidentiality reasons or it could be that something which you have produced as part of your day-to-day work is normally kept in a filing cabinet or stored electronically in a PC.

In compiling your portfolio, we suggest that anything you produce as part of your day-to-day work is kept in its normal location, but those pieces of evidence which have been produced specifically for your SVQ, eg witness testimony statements or personal statements, are filed in your portfolio. However, assessors and verifiers should be able to locate and access your evidence at all times. It is, therefore, very important that you clearly reference every item of evidence.

Referencing your evidence

Your assessor, as well as the internal and external verifiers, will need to find their way around your portfolio, so you should give each piece of evidence a number.

Remember, that where you have used ‘integration of assessment’, you need to give details of all the Units and Elements which are linked to a specific piece of evidence. The links should be noted on the pieces of evidence themselves as well as on the index of evidence (cross-referencing).

How to complete the Index of evidence (Example 1)

You should complete an *index of evidence* sheet and file it immediately before the actual pieces of evidence in your portfolio.

The index of evidence should be completed by:

- ◆ entering the evidence number in the first column
- ◆ giving a brief description of each piece of evidence in the second column
- ◆ explaining where the evidence can be found in the third column

You must make sure that the information contained in the evidence index is accurate when you give your portfolio to your assessor, particularly in relation to where the evidence can be located.

Completing the Element Achievement Records (Example 3)

There is an Element Achievement Record for every Element within this portfolio. These records have been designed to allow you to record the evidence you have gathered for each Element. Each record has boxes across it which represents the Performance Criteria, Range Statement, Evidence Requirements and Knowledge and Understanding statement, these will differ from Element to Element so it is important to make sure you are using the right one. Whilst collecting your evidence you should use these grids to display the Performance Criteria, Range, Knowledge and Understanding and Evidence Requirement that piece of evidence relates to. In the first box write the evidence index number you have given to that piece of evidence. In the second box give a brief description of the evidence, then tick against the relevant Performance Criteria, Range, Evidence Requirements and Knowledge and Understanding.

Worked examples

To give you a clearer picture of how to compile your portfolio, you will find worked examples of the various forms over the next few pages. You should ask your assessor for further advice and support if you are still unsure about how to use the forms and who should complete them.

Index of evidence

(Example 1)

SVQ title and level: Using IT at level 3

| Evidence number | Description of evidence | Included in portfolio (Yes/No) If no, state location | Sampled by the IV (initials and date) |
|------------------------|---|---|--|
| 1 | Action plan identifying customer requirements | Yes | |
| 2 | Personal Statement | Yes | |
| 3 | Witness Testimony | Yes | |
| 4 | Record of Questions and Answers | Yes | |
| 5 | Log of configuration details and errors | Yes | |
| 6 | Observation Checklist | Yes | |
| 7 | Procedure for shutting down system | Yes | |
| 8 | Company media storage policy | No. Can be found with General Manager | |

Unit progress record

(Example 2)

Qualification and level: Using IT at level 3

Candidate: Anne Thomas

To achieve the whole qualification, you must prove competence in **mandatory** Units and **optional** Units.

Unit Checklist — circle the reference number of each Unit as you complete

Circle the reference numbers as you complete each Unit. You can then easily see what stage you have reached in your SVQ.

| | | | | | | | |
|------------------|-----|-----|-----|-----|-----|-----|--|
| Mandatory | 206 | 301 | 302 | 303 | 308 | | |
| Optional | 305 | 306 | 311 | 312 | 326 | 327 | |

Mandatory Units

| Unit Number | Title | Assessor | Date |
|-------------|--|----------|-----------|
| 206 | Ensure your own actions reduce risks to H&S | | |
| 301 | Select and enable IT for use | P. Jones | 28/4/2000 |
| 302 | Maintain the Software Environment | P. Jones | 28/4/2000 |
| 303 | Develop and maintain the effectiveness of the IT working environment | P. Jones | 8/4/2000 |
| 308 | Develop your own effectiveness and professionalism | | |

This section of the form is for your assessor to sign each time you successfully achieve a Unit.

Optional Units

| | | | |
|-----|---|--|--|
| 305 | Design and produce documents using software | | |
| 306 | Design and produce spreadsheets | | |
| 311 | Design and use databases | | |
| 312 | Design & produce documents using graphics | | |
| 326 | Design & produce presentations using IT | | |
| 327 | Control the use of electronic communication | | |

Element achievement record

(Example 3)

Unit title: Select & enable IT for use

Element: 301.1 Select & configure equipment for use

| Evidence Index No | Description of Evidence | Performance Criteria | | | | | | | | Range | | | Knowledge & Understanding | | | | | |
|-------------------|-------------------------------|----------------------|---|---|---|---|---|---|---|-------|---|---|---------------------------|----|----|----|----|--|
| | | a | b | c | d | e | f | g | h | 1 | 2 | 3 | K1 | K2 | K3 | K4 | K5 | |
| 1 | Action Plan | ✓ | ✓ | | | ✓ | | | | ✓ | | | | | | | | |
| 2 | Personal Statement | ✓ | ✓ | | | ✓ | | | | ✓ | | | | | | | | |
| 3 | Copy of Legislation | | | ✓ | ✓ | | | | | | | ✓ | | | | | | |
| 5 | Record of Questions & Answers | ✓ | ✓ | ✓ | | ✓ | | | | ✓ | ✓ | ✓ | | | | | | |
| 6 | Log of Configuration Details | | | | | | | ✓ | ✓ | ✓ | | ✓ | | | | | | |

These numbers relate to your Evidence Index and will allow your assessor to

Give a brief description of the evidence you are offering for assessment against each Performance Criteria, range and piece of knowledge and understanding

As you collect your evidence for assessment you should tick the relevant boxes. There is a box which represents each Performance Criteria and range in the element

Candidates should enter which areas of knowledge and understanding that piece of evidence covers.

Candidate: _____ Assessor: _____ IV: _____

Date: _____ Date: _____ Date: _____

Personal statement

(Example 4)

| Date | Evidence index number | Details of statement | Links to other evidence (enter numbers) | Units, elements, pcs, and range covered |
|--------|-----------------------|--|---|---|
| 4/4/00 | 1 | <p>Statement that I know and understand customer requirements. Names of customer and software and hardware requirements in portfolio.</p> <p>Statements that I understand how to set up, equipment, configure software that met customer requirements. Details of equipment and software with dates are listed in portfolio.</p> | 1 | 301.1.a,b,e Range 1 |

Candidate signature: Anne Thomas

Date: 2/4/2000

Observation Record

(Example 5)

Unit/Element(s): (301) Select and Enable IT for Use

Candidate: Anne Thomas Date of observation: 28/4/2000

Evidence index number: 8

| Skills/activities observed: | PCs and range covered: |
|-----------------------------|---|
| Saving and storing files | Element 301.3 PCs: a-f Range: materials (consumables, removable storage media), regulations (current legislation, manufacturer's instructions, organisational procedures), system (application software, hardware, system software). |

Knowledge and understanding apparent from this observation:

Candidate can save and organise files. She can delete unwanted files and can shut down system according to organisation's procedures and manufacturer's instructions.

Other Units/elements to which this evidence may contribute:

302.1.b,c Range 1,3

Assessor comments and feedback to candidate:

I can confirm the candidate's performance was satisfactory.

Assessor signature: Peter Jones Date: 28/4/2000

Candidate signature: Anne Thomas Date: 28/4/2000

Witness testimony

(Example 6)

| | | |
|--|--|-----------------|
| SVQ title and level: | Using IT level 3 | |
| Candidate name: | Anne Thomas | |
| Evidence index no: | 4 | |
| Where applicable, evidence no. to which this testimony relates: | | |
| Element(s): | 301.2 | Range: 1 |
| Date of evidence: | 8/4/2000 | |
| Witness name: | Ian Cummings | |
| Designation/relationship to candidate: | Line manager | |
| Details of testimony: | <p>I can attest that I observed Anne Thomas following company and national regulations in the use of software. She understands and has knowledge of these regulations and I observed her following them when selecting and configuring software.</p> | |
| | <p>I can confirm the candidate's evidence is authentic and accurate.</p> | |
| Witness signature: | Ian Cummings | |
| Name: | Ian Cummings | |
| Date: | 8/4/2000 | |

Please tick the appropriate box:

A1/A2 or D32/D33 Award

Familiar with the SVQ standards to which the candidate is working

Record of questions and candidate's answers (Example 7)

| | |
|---|----------------------|
| Unit: 301 Select & enable IT for use | Element(s): 1 |
| Evidence index number: 5 | |
| <p>Circumstances of assessment: As part of the staff induction scheme IT staff are regularly interviewed and asked about their knowledge and skills. Anne Thomas was interviewed on the 21 March 2000 and below is a summary of the interview where it relates to her knowledge of resources and problem solving.</p> | |
| <p>List of questions and candidate's responses:</p> <p>Q: If a member of staff asked you for a particular piece of equipment, would procedures would you follow?</p> <p>A: I would ensure that a hardware requisition form has been filled out with the rational for needing such equipment, countersigned by their line and general managers. If approved, next step would be to ask the member of staff if they need specific training. Pc 301.1.a,b,e Range 1,2,3</p> <p>Q: You discover that a member of staff has installed a piece of software on their workstation PC. What do you do?</p> <p>A: If they installed it themselves then this is a serious breach of company regulations and I would inform the IT manager. I would then remove the software. Pc 301.1.c, Range 2,3</p> | |
| Assessor's signature: Davinder Singh | Date: 21/3/2000 |
| Candidate's signature: <i>Anne Thomas</i> | Date: 21/3/2000 |

Section 3 — The Units and recording documents for your SVQ

Unit Progress Record

Qualification and level: Construction Plant Maintenance level 2

Candidate: _____

To achieve the whole qualification, you must prove competence in all **seven mandatory** Units, plus any **three optional** Units.

Please note the table below shows the SSC identification codes listed alongside the corresponding SQA Unit numbers. It is important that the SQA Unit numbers are used in all your recording documentation and when your results are communicated to SQA. SSC identification codes are **not valid** in these instances.

Unit Checklist — circle the reference number of each Unit as you complete it.

Note: The Construction Industry Training Board (CITB) Health and Safety test sets the standard for the industry. Taken by over 500,000 people every year, it ensures that everyone working in construction has a minimum level of health and safety awareness. Passing this test is equivalent to completing a mandatory Unit within the framework of this qualification. You must provide physical evidence that you have passed the test by providing your assessor with the relevant test certificate.

| | | | | | | | |
|------------------|------|------|------|------|------|------|-----------------------------|
| Mandatory | PM05 | PM06 | PM07 | PM08 | PM09 | PM10 | CITB Health and Safety Test |
| Optional | PM11 | PM12 | PM13 | PM14 | PM15 | PM16 | PM23 |

Mandatory Units (*all Units should be completed*)

| SQA Unit Number | SSC Unit Number | Title | Assessor | Internal Verifier | Date |
|------------------------|------------------------|--|-----------------|--------------------------|-------------|
| DE6J 04 | PM05 | Carry Out Servicing and Maintenance of Plant and Equipment | | | |
| DE7N 04 | PM06 | Remove and Replace Plant Equipment Components | | | |
| DE75 04 | PM07 | Dismantle and Assemble Plant and Equipment Components | | | |
| DE7G 04 | PM08 | Maintain the Work Area | | | |
| DE7A 04 | PM09 | Inspect Plant and Equipment for Operational Serviceability | | | |
| DE72 04 | PM10 | Diagnose Faults in Plant Equipment Systems and Components | | | |
| D8GA 04 | N/A | CITB Health and Safety Test | | | |

Optional Units (*any three Units should be completed*)

| SQA Unit Number | SSC Unit Number | Title | Assessor | Internal Verifier | Date |
|------------------------|------------------------|---|-----------------|--------------------------|-------------|
| DE7P 04 | PM11 | Repair Plant and Equipment by Soldering and Welding | | | |
| DE7K 04 | PM12 | Produce One-off Components to Assist Plant and Equipment Activities | | | |
| DE7H 04 | PM13 | Move Standard Loads | | | |
| DE7F 04 | PM14 | Install Plant and Equipment for Operational Activities | | | |
| DE6L 04 | PM15 | Carry Out Specific Tests on Plant Equipment | | | |
| DE6N 04 | PM16 | Configure Plant and Equipment for Operational Activities | | | |
| DE78 04 | PM23 | Hand Over Plant and Equipment to the Control of Others | | | |

UNIT PM05 (DE6J 04)

Carry Out Servicing and Maintenance of Plant and Equipment

Unit Summary

This Unit addresses the competence required by a plant mechanic to carry out servicing and maintenance procedures and activities to specification on plant machinery and equipment.

UNIT PM05 (DE6J 04)

Carry Out Servicing and Maintenance of Plant and Equipment

Performance Criteria

You must:

- 1 Work safely at all times, complying with health and safety and other relevant regulations and guidelines.
- 2 Follow the relevant maintenance schedules to carry out the required work.
- 3 Carry out the maintenance activities within the limits of your personal authority.
- 4 Carry out the maintenance activities in the specified sequence and in an agreed timescale.
- 5 Report any instances where the maintenance activities cannot be fully met or where there are identified defects outside the planned schedule.
- 6 Complete relevant maintenance records accurately and pass them on to the appropriate person.
- 7 Dispose of waste materials in accordance with safe working practices and approved procedures.

Scope of Performance

This should cover:

- 1 Level and extent of responsibility:
 - ◆ for this standard, responsibility extends to following instructions and the implementing the necessary servicing and maintenance procedures that need to be carried out
 - ◆ in some cases you may be expected to refer to others for final authorisation even though you remain responsible for identifying and implementing decisions
- 2 Assets or equipment to be maintained:
 - ◆ the plant/machinery and their associated systems are those typically used in the construction and allied industries, plant hire and tool hire industries and could include:
 - wheeled plant
 - tracked plant
 - static plant
 - small plant and equipment
 - power tools
 - ancillary equipment
 - attachments

UNIT PM05 (DE6J 04)

Carry Out Servicing and Maintenance of Plant and Equipment

Scope of Performance (cont)

- 3 Types of maintenance procedures and activities:
- ◆ the servicing and maintenance procedures would be:
 - undertaken under operational conditions — on construction sites, client's/hirer's premises
 - undertaken under non-operational conditions in maintenance workshops, premises
 - ◆ typical servicing and maintenance activities carried out could include:
 - replenishment of fuels, lubricants, fluids, coolants
 - replacement of fuels, lubricants, fluids, coolants
 - replacement of regularly changed life components, ie filters, fan belts, alternator belts, drive belts, brake linings, brake pads, bulbs, fuses, gaskets, seals
 - lubrication of parts, components, linkages, cables
 - flushing through cooling, lubrication and fluid systems
 - cleaning of parts and components
 - securing fastenings, nuts and bolts, linkages etc
 - replacing fastenings, nuts, bolts etc
 - carrying out minor adjustments to specification
 - disposing of waste materials and substances
- 4 Quality standards and accuracy to be achieved:
- ◆ in accordance with manufacturers' specifications and organisational procedures

Knowledge and Understanding

You must have knowledge and understanding of:

- K1 Health and safety legislation, regulations and safe working practices and procedures:
- ◆ relevant parts of the Health and Safety at Work Act 1974, Provision and Use of Work Equipment Regulations, Control of Substances Hazardous to Health Regulations, Electricity at Work Regulations, Manual Handling Operations Regulations, Lifting Operations and Lifting Equipment Regulations, your company's health and safety policies and procedures for your workplace
 - ◆ the health and safety issues specific to servicing and maintenance:
 - use of personal protective equipment
 - manual handling procedures
 - safety checks on specific items of plant and equipment
 - reasons for care and protection of surrounding areas and those persons who may be affected by, but are not engaged in, the work
 - injury through the release of substances, eg scalding from hot lubricants and coolants
 - slipping on wet/greasy surfaces
- K2 Maintenance schedules and related specifications:
- ◆ manufacturers maintenance schedules and related specifications for the plant and equipment you are working on
 - ◆ use of workshop manuals, parts manuals, cross-reference guides, technical service bulletins

UNIT PM05 (DE6J 04)

Carry Out Servicing and Maintenance of Plant and Equipment

Knowledge and Understanding (cont)

- K3 Maintenance methods and procedures:
- ◆ the routine and non-routine maintenance methods and procedures required by the manufacturer
 - periodic servicing methods
 - scheduled servicing
 - organisational instructions and procedures
 - ◆ the types of resource that are available and their suitability for different servicing and maintenance tasks:
 - fuels, lubricants, coolants
 - replacement parts
 - reusable parts
 - tools and equipment
 - consumables: fastenings, pins, bolts, nuts etc
 - ◆ different types of application techniques for fuels, lubricants and coolants
 - ◆ problems that can occur during servicing and maintenance tasks and how they can be rectified:
 - lack of supply of parts and components
 - timescale: machine/equipment downtime
 - spillages of substances and how to deal with them

Knowledge and Understanding (cont)

- K4 Maintenance records and documentation procedures:
- ◆ the records kept in your organisation in relation to planned maintenance
 - ◆ the importance of keeping servicing and maintenance records
 - ◆ organisational and statutory requirements
 - ◆ service history of individual machines
 - ◆ operational efficiency
 - ◆ customer requirements (where applicable)
- K5 Equipment operating and care and control procedures:
- ◆ operating machines and equipment to carry out functional and safety checks prior to, and in completion of, servicing and maintenance tasks
 - ◆ carrying out sensory checks on completion of work to check for leaks, defects, smells, sounds, etc
 - ◆ carrying out checks as specified by manufacturers eg standard scheduled adjustments
- K6 Maintenance authorisation procedures as specified by the manufacturer, your organisation (where applicable to the customer).
- K7 Waste disposal procedures:
- ◆ your organisation's procedures for the handling and disposal of waste material and substances
- K8 Reporting lines and procedures:
- ◆ organisational reporting and communication procedure when carrying out servicing and maintenance tasks

UNIT PM05 (DE6J 04)

Carry Out Servicing and Maintenance of Plant and Equipment

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____

Date: _____

Assessor: _____

Date: _____

Internal Verifier: _____

Date: _____

UNIT PM06 (DE7N 04)

Remove and Replace Plant Equipment Components

Unit Summary

This Unit refers to the competence required by a plant mechanic to remove and replace components fitted to plant machinery and equipment.

Element 6.1: Remove Components from Plant and Equipment

Element 6.2: Replace Components to Plant and Equipment

UNIT PM06 (DE7N 04)

Remove and Replace Plant Equipment Components

Element 6.1: Remove Components from Plant and Equipment

Performance Criteria

You must:

- 1 Work safely at all times, complying with health and safety and other relevant regulations and guidelines.
- 2 Establish, and where appropriate, mark component orientation for reassembly.
- 3 Ensure that any stored energy or substances are released safely and correctly.
- 4 Remove the required components using approved tools and techniques.
- 5 Take suitable precautions to prevent damage to components, tools and equipment during removal.
- 6 Check the condition of the removed components and record those that will require replacing.
- 7 Label and store the removed components in an appropriate location.
- 8 Store or discard the removed components in accordance with approved procedures.
- 9 Maintain documentation in accordance with organisational requirements.

Scope of Performance

This should cover:

- 1 Level and extent of responsibility. The candidate will be expected to carry out the removal of components as per job requirements and may still be expected to refer to others (eg chargehand, supervisor) for final authorisation.
- 2 Equipment to be worked on. Type of plant and equipment to be worked on would be those associated with the construction, plant and tool hire industries and could include:
 - ◆ wheeled plant
 - ◆ tracked plant
 - ◆ static plant
 - ◆ small plant
 - ◆ portable plant
 - ◆ power tools
 - ◆ attachments
 - ◆ ancillary equipment
- 3 Type of components to be removed could include:
 - ◆ robust components:
 - housings and casings
 - gear boxes
 - steering components
 - tracks and running gear
 - motors and actuators, pumps
 - braking system components
 - fuel pumps

UNIT PM06 (DE7N 04)

Remove and Replace Plant Equipment Components

Element 6.1: Remove Components from Plant and Equipment

Scope of Performance (cont)

- ◆ fragile components:
 - switches
 - instruments
 - springs
 - bulbs, fuses, relays
 - electronic control units
 - pipework
 - wiring
 - seals
- 4 Removal techniques or procedures to be followed:
 - ◆ unplugging
 - ◆ de-soldering
 - ◆ lubricating
 - ◆ freeing off corroded components
 - ◆ use of hydraulic press
 - ◆ use of specialist tools (pullers, clamps, alignment tools)
 - ◆ filing, dressing
- 5 Complexity of removal operations:
 - ◆ in easily accessible state
 - ◆ in situ operations
 - ◆ in workshop locations
 - ◆ on site, client's/hirer's premises

Knowledge and Understanding

You must have knowledge and understanding of:

- K1 Health and safety legislation, regulations and safe working practices and procedures:
 - ◆ relevant parts of the Health and Safety at Work Act 1974, Provision and Use of Work Equipment Regulations, Control of Substances Hazardous to Health Regulations, Electricity at Work Regulations, Manual Handling Operations Regulations, Lifting Operations and Lifting Equipment Regulations, your company's health and safety policies and procedures for your workplace
 - ◆ specific health and safety issues relating to removing components on plant machinery and equipment:
 - strains or injuries caused by lifting heavy objects
 - injury through handling sharp edges or components
 - trapping of hands and fingers
- K2 Engineering drawings and related specifications:
 - ◆ use of manufacturer's technical literature to interpret information, eg workshop manuals, technical service bulletins, parts manuals — exploded views, pictorial views, other related specifications for the equipment you work on
- K3 Component removal methods and techniques:
 - ◆ the types of component removal methods and techniques you should use for the plant and equipment you are working on
 - ◆ materials handling and preparation methods and techniques
 - ◆ the types of isolation and disconnection that have to be made:
 - electrical

UNIT PM06 (DE7N 04)

Remove and Replace Plant Equipment Components

Element 6.1: Remove Components from Plant and Equipment

Knowledge and Understanding (cont)

- pressure lines
 - fuels
 - coolants
 - lubricants
 - any markings which need to be made to components prior to removal, eg punch marks, paint marks, chalk, scribe marks, use of tape
- K4 Identification of component defects:
- ◆ manufacturers' guidelines
 - ◆ visual inspection
 - ◆ organisational guidelines
- K5 Labeling and storage of components for reuse:
- ◆ your organisation's instructions and procedures for labelling and storage of components for reuse
- K6 Disposal of unwanted components and substances as appropriate:
- ◆ your organisation's procedures for disposing of waste substances and unwanted components
- K7 Tool and equipment care and control procedures:
- ◆ wrappings, lubricating, taping etc
 - ◆ electrical, electronic components, hydraulic components: cleanliness and protection
 - ◆ covering threads and keyways to prevent damage to seals etc
- K8 Reporting lines and procedures:
- ◆ your organisation's reporting lines and communications procedures when components have been removed

UNIT PM06 (DE7N 04)

Remove and Replace Plant Equipment Components

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____

Date: _____

Assessor: _____

Date: _____

Internal Verifier: _____

Date: _____

UNIT PM06 (DE7N 04)

Remove and Replace Plant Equipment Components

Element 6.2: Replace Components to Plant and Equipment

Performance Criteria

You must:

- 1 Work safely at all times, complying with health and safety and other relevant regulations and guidelines.
- 2 Obtain all the required components and ensure that they are in a suitable condition for replacement and fit for purpose.
- 3 Ensure that any replacement components used meet the required specification.
- 4 Take adequate precautions to prevent damage to components, tools and equipment during replacement.
- 5 Replace the components in the correct sequence using appropriate tools and techniques.
- 6 Make any necessary settings or adjustments to the components to ensure they will function correctly.
- 7 Deal promptly and effectively with problems within your control and report those that cannot be solved.
- 8 Maintain documentation in accordance with organisational requirements.

Scope of Performance

This should cover:

- 1 Level and extent of responsibility:
 - ◆ the candidate will be expected to carry out the replacement of components as per job requirements and may still be expected to refer to others (eg chargehand, supervisor) for final authorisation
- 2 Equipment to be worked on:
 - ◆ type of plant and equipment to be worked on would be those associated with the construction plant and tool hire industries and could include:
 - wheeled plant
 - tracked plant
 - static plant
 - portable plant
 - power tools
 - attachments
 - ancillary equipment
- 3 Type of components to be replaced could include:
 - ◆ robust components:
 - housings and casings
 - gear boxes
 - fuel pumps
 - tracks and running gear
 - steering components
 - motors and actuators, pumps
 - braking system components

UNIT PM06 (DE7N 04)

Remove and Replace Plant Equipment Components

Element 6.2: Replace Components to Plant and Equipment

Scope of Performance (cont)

- ◆ fragile components:
 - switches
 - instruments
 - springs
 - bulbs, fuses, relays
 - electronic control units
 - pipework
 - wiring
 - seals
- 4 Assembly methods and techniques to be used:
 - ◆ lifting
 - ◆ positioning
 - ◆ adjusting, use of hand tools and equipment following manufacturers' guidelines
- 5 Complexity of assembly operations:
 - ◆ in easily accessible state
 - ◆ in situ operations
 - ◆ in workshop locations
 - ◆ on site, client's/hirer's premises
- 6 Quality standards and accuracy to be achieved; in accordance with manufacturers' guidelines and specifications.

Knowledge and Understanding

You must have knowledge and understanding of:

- K1 Health and safety legislation, regulations and safe working practices and procedures:
 - ◆ relevant parts of the Health and Safety at Work Act 1974, Provision and Use of Work Equipment Regulations, Control of Substances Hazardous to Health Regulations, Electricity at Work Regulations, Manual Handling Operations Regulations, Lifting Operations and Lifting Equipment Regulations, your company's health and safety policies and procedures for your workplace
 - ◆ specific health and safety issues relating to replacing components on plant machinery and equipment:
 - strains or injuries caused by lifting heavy objects
 - injury through handling sharp edges or components
 - trapping of hands and fingers
- K2 Engineering drawings and related specifications:
 - ◆ use of manufacturers' technical literature for interpreting information when replacing components, eg use of manufacturers' specifications for technical data, eg torque sizes, settings, adjustments
- K3 Component replacement methods and techniques:
 - ◆ the types of reconnections that have to be made
 - ◆ push or press fit
 - ◆ soldering
 - ◆ securing methods: bolts, clamps, locking pins, screws, other specialist retaining devices
 - ◆ manufacturers' replacement guidelines

UNIT PM06 (DE7N 04)

Remove and Replace Plant Equipment Components

Element 6.2: Replace Components to Plant and Equipment

Knowledge and Understanding (cont)

- K4 Handling equipment, methods and techniques:
- ◆ procedures used in your organisation for safe handling of the components you need to replace:
 - mechanical handling
 - protection of components when re-fitting
 - manual handling techniques
- K5 Tools, equipment that can be used to replace specific components on and in plant and equipment:
- ◆ hand tools
 - ◆ power tools
 - ◆ specialist refitting tools
- K6 Reporting lines and procedures:
- ◆ your organisation's reporting lines and procedures associated with the replacement of components on plant machinery and equipment
 - ◆ your organisation's procedures for the care, security and control of tools and equipment

UNIT PM06 (DE7N 04)

Remove and Replace Plant Equipment Components

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____

Date: _____

Assessor: _____

Date: _____

Internal Verifier: _____

Date: _____

UNIT PM07 (DE75 04)

Dismantle and Assemble Plant and Equipment Components

Unit Summary

This Unit refers to the competence required by a plant mechanic to dismantle and assemble plant machinery equipment and components to specification.

Element 7.1: Dismantle Components

Element 7.2: Assemble Components to Meet Specification

UNIT PM07 (DE75 04)

Dismantle and Assemble Plant and Equipment Components

Element 7.1: Dismantle Components

Performance Criteria

You must:

- 1 Work safely at all times, complying with health and safety and other relevant regulations and guidelines.
- 2 Establish and where appropriate mark component for reassembly.
- 3 Ensure that any stored energy or substances are released safely and correctly.
- 4 Make all isolations and disconnections to the equipment in line with approved procedures.
- 5 Carry out the dismantling to the agreed level using correct tools and techniques.
- 6 Store components for reuse in approved locations.
- 7 Dispose of unwanted components and substances in accordance with approved procedures.
- 8 Deal promptly and effectively with problems within your control and report those that cannot be solved.

Scope of Performance

This should cover:

- 1 Level and extent of responsibility:
 - ◆ for this standard the candidate's responsibility is limited to working within detailed specifications and following clearly defined procedures. In some cases the candidate will still be expected to refer to others (eg chargehand, supervisor) for final authorisation
- 2 Type of assets to be dismantled are those associated with plant and equipment used in the construction and allied industries, plant hire and small plant and tool hire industries and could include:
 - ◆ power units and their associated components
 - ◆ transmission units and associated components
 - ◆ fluid power system components
 - ◆ electrical/electronic components
 - ◆ tracks and associated assemblies
 - ◆ clutch assemblies
 - ◆ braking system components
 - ◆ small plant
 - ◆ portable plant
 - ◆ power tools
- 3 Typical techniques could include:
 - ◆ unfastening of threaded fasteners
 - ◆ removing specialist retaining devices
 - ◆ unplugging of male/female connections
 - ◆ removal of quick release fasteners
 - ◆ use of drifts to remove pins, shafts etc
 - ◆ use of hydraulic presses to remove parts

UNIT PM07 (DE75 04)

Dismantle and Assemble Plant and Equipment Components

Element 7.1: Dismantle Components

Scope of Performance (cont)

- 4 Types of disconnection to be made:
 - ◆ hazardous
 - ◆ non-hazardous
- 5 Complexity of dismantling to be carried out:
 - ◆ components to be dismantled would either be easily accessible or 'in-position' and would be carried out in a typical construction/plant hire maintenance environment, eg workshop, on site, client's/hirer's premises

Knowledge and Understanding

You must have knowledge and understanding of:

- K1 Health and safety legislation, regulations and safe working practices and procedures:
 - ◆ relevant parts of the Health and Safety at Work Act 1974, Provision and Use of Work Equipment Regulations, Control of Substances Hazardous to Health Regulations, Electricity at Work Regulations, Manual Handling Operations Regulations, Lifting Operations and Lifting Equipment Regulations, your company's health and safety policies and procedures for your workplace
 - ◆ specific health and safety issues relating to refitting components on plant, machinery and equipment:
 - strains or injuries caused by lifting heavy objects
 - injury through handling sharp edges or components
 - trapping of hands and fingers
- K2 Engineering drawings and related specifications:
 - ◆ types and purpose of information sources and related specifications:
 - manufacturers' technical information
 - workshop manuals
 - parts manuals/lists, cross-reference guides
 - technical service bulletins
 - manual or computerised systems

UNIT PM07 (DE75 04)

Dismantle and Assemble Plant and Equipment Components

Element 7.1: Dismantle Components

Knowledge and Understanding (cont)

- K3 Dismantling methods and techniques to be used:
- ◆ in accordance with manufacturer's instructions and recommendations
 - ◆ which isolations and disconnections need to be made prior to dismantling eg electrical, hydraulic, pneumatic pressures, fluids and other substances
 - ◆ why isolations should be made in the correct sequence
 - ◆ where and when dismantling occurs
 - ◆ purpose of examining parts and components when dismantling
 - ◆ adequate checks of compliance with specifications: measurements, tolerances, comparitors
- K4 Handling equipment methods and techniques:
- ◆ your organisation's procedures for safe manual and mechanical handling for the components you are dismantling
 - ◆ the types of damage that can occur to equipment and components when dismantling:
 - broken or damaged parts and components ie gears, bearings, bushes, linkages, housings, retaining devices, cables

Knowledge and Understanding (cont)

- K5 Tool and equipment care and control procedures:
- ◆ tools, equipment and methods that should be used for dismantling specific components:
 - hand tools
 - specialist tools, eg slide hammers, extractors, pullers, clamps
 - power tools
 - tool and equipment care and control procedures as in accordance with your organisational procedures
 - lifting equipment and lifting aids
 - storage and security of specialist tools and equipment
- K6 Waste disposal procedures:
- ◆ disposal of waste substance and materials in accordance with your organisation's disposal procedures (hazardous and non-hazardous)
- K7 Reporting lines and procedures:
- ◆ your organisation's reporting lines and procedures
 - ◆ who should be informed
 - ◆ the consequence of not passing on information relating to problems encountered when carrying out dismantling tasks and procedures

UNIT PM07 (DE75 04)

Dismantle and Assemble Plant and Equipment Components

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____

Date: _____

Assessor: _____

Date: _____

Internal Verifier: _____

Date: _____

UNIT PM07 (DE75 04)

Dismantle and Assemble Plant and Equipment Components

Element 7.2: Assemble Components to Meet Specification

Performance Criteria

You must:

- 1 Work safely at all times, complying with health and safety and other relevant regulations and guidelines.
- 2 Follow the relevant instructions, assembly drawings and any other specifications.
- 3 Ensure that the specified components are available and that they are in a usable condition.
- 4 Use the appropriate methods and techniques to assemble the components in their correct positions.
- 5 Secure the components using the specified connectors and securing devices.
- 6 Check the completed assembly to ensure that all operations have been completed and the finished assembly meets the required specification.
- 7 Deal promptly and effectively with problems within your control and report those that cannot be solved.

Scope of Performance

This should cover:

- 1 Level and extent of responsibility:
 - ◆ for this standard the candidate's responsibility is limited to working within detailed specifications and following clearly defined procedures. In some cases the candidate will still be expected to refer to others (eg chargehand, supervisor) for final authorisation
- 2 Type and complexity of assembly to be produced:
 - ◆ full assemblies
 - ◆ sub assemblies
 - ◆ robust components
 - ◆ fragile components
- 3 Assembly methods and techniques to be used:
 - ◆ use of fasteners and retainers
 - ◆ connecting mating surfaces
 - ◆ drift/press in position
 - ◆ positioning and securing
 - ◆ shimming — adjusting
 - ◆ use of adhesives
 - ◆ using manufacturers' guidelines
- 4 Type of components used:
 - ◆ typical components could include:
 - ◆ bearings, housings, shafts
 - ◆ linkages, cables, seals, gears, keys, drive belts, springs, pins
 - ◆ retaining devices, operating mechanisms, electrical/electronic parts and components

UNIT PM07 (DE75 04)

Dismantle and Assemble Plant and Equipment Components

Element 7.2: Assemble Components to Meet Specification

Scope of Performance (cont)

- 5 Quality standards and accuracy to be achieved:
- ◆ in accordance with manufacturers' tolerances and specifications

Knowledge and Understanding

You must have knowledge and understanding of:

- K1 Health and safety legislation, regulations and safe working practices and procedures:
- ◆ relevant parts of the Health and Safety at Work Act 1974, Provision and Use of Work Equipment Regulations, Control of Substances Hazardous to Health Regulations, Electricity at Work Regulations, Manual Handling Operations Regulations, Lifting Operations and Lifting Equipment Regulations, your company's health and safety policies and procedures for your workplace
 - ◆ specific health and safety issues relating to assembly injury through lifting, repositioning eg trapped fingers and hands
- K2 Assembly drawings and related specifications:
- ◆ types and purpose of information sources:
 - workshop manuals and specifications
 - manufacturers' technical information
 - technical service bulletins (sketches, pictorial views, exploded views)
 - parts manuals/lists
 - cross-reference guides (manual and computer-based)
- K3 Assembly methods and techniques:
- ◆ in accordance with manufacturer's instructions and guidelines
 - ◆ use of measuring equipment comparitors, specialist tools
 - ◆ positioning and adjusting parts and components

UNIT PM07 (DE75 04)

Dismantle and Assemble Plant and Equipment Components

Element 7.2: Assemble Components to Meet Specification

Knowledge and Understanding (cont)

- K4 Quality control procedures and recognition of assembly defects:
- ◆ functional checking of assembled parts and components:
 - methods of checking components, sub assemblies, before, during and after re-assembly
 - testing and checking rotating components for freedom of movement
 - carrying out adjustments to manufacturers' specifications
 - torque settings for assembly
 - typical defects and variations that arise and their identification
 - inherent defects in parts and materials
 - faulty replacement parts and components discovered after assembly
- K5 Handling equipment and procedures:
- ◆ your organisation's procedures for safe manual and mechanical methods for handling the type of components to be assembled
- K6 Preparation methods and techniques:
- ◆ manufacturers' and organisation's procedures for full and sub-assemblies, parts and components
 - ◆ methods of cleaning components
 - ◆ lubricating components during assembly
 - ◆ protecting threads (internal and external)
 - ◆ keeping areas clean and tidy for assembling components

Knowledge and Understanding (cont)

- K7 Tool and equipment care and control procedures:
- ◆ in accordance with your organisation's procedures ie, lifting equipment, lifting aids, storage and security of specialist tools and equipment
- K8 Reporting lines and procedures:
- ◆ your organisation's reporting lines and procedures
 - ◆ who should be informed
 - ◆ the consequences of not passing on information relating to problems encountered when assembling parts and components, assemblies and sub-assemblies

UNIT PM07 (DE75 04)

Dismantle and Assemble Plant and Equipment Components

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____

Date: _____

Assessor: _____

Date: _____

Internal Verifier: _____

Date: _____

UNIT PM08 (DE7G 04)

Maintain the Work Area

Unit Summary

This Unit is about keeping your work area and immediate environment in a suitable condition to enable you to carry out safe and effective working practices. It extends to preparing the work area to carry out plant maintenance and repair activities, clearing, cleaning and tidying away materials, tools and equipment and various substances during and on completion of work, returning those resources to storage. It also covers the correct disposal of both hazardous and non-hazardous waste material.

Element 8.1: Prepare Work Areas and Materials for Plant Maintenance Activities

Element 8.2: Reinstate the Work Area after Plant Maintenance Activities

Element 8.3: Store Resources for Further Use

UNIT PM08 (DE7G 04)

Maintain the Work Area

Element 8.1: Prepare Work Areas and Materials for Plant Maintenance Activities

Performance Criteria

You must:

- 1 Work at all times within health and safety and other relevant regulations and guidelines.
- 2 Ensure that the work environment is suitable for the work activities to be undertaken.
- 3 Prepare the work area for the storage of materials and finished products.
- 4 Ensure that all necessary service supplies are connected and ready for use.
- 5 Obtain all the required materials and ensure that they are suitably prepared for the activities to be carried out.
- 6 Make sure that required safety arrangements are in place to protect other workers from activities likely to disrupt normal working.
- 7 Inform the appropriate people when preparations are completed.
- 8 Deal promptly with problems within your control and report those that cannot be solved.

Scope of Performance

This should cover:

- 1 Level and extent of responsibility:
 - ◆ for this standard the candidate would be required to prepare work areas and materials according to the job requirements
- 2 Complexity of preparations:
 - ◆ in accordance with the plant maintenance and repair activities being undertaken
- 3 Types of work area:
 - ◆ workshop
 - ◆ site
 - ◆ hirer's/client's premises
 - ◆ types of materials:
 - consumables (tools and equipment)
 - hazardous and non-hazardous
- 4 Type of work area protection and safety requirements:
 - ◆ cleanliness
 - ◆ tidiness
 - ◆ safety

UNIT PM08 (DE7G 04)

Maintain the Work Area

Element 8.1: Prepare Work Areas and Materials for Plant Maintenance Activities

Knowledge and Understanding

You must have knowledge and understanding of:

- K1 Health and safety legislation, regulations and safe working practices and procedures:
- ◆ relevant parts of the Health and Safety at Work Act 1974, Provision and Use of Work Equipment Regulations, Control of Substances Hazardous to Health Regulations, Electricity at Work Regulations, Manual Handling Operations Regulations, Lifting Operations and Lifting Equipment Regulations, your company's health and safety policies and procedures for your workplace
 - ◆ use of personal protective equipment
- K2 Work area preparation requirements and methods:
- ◆ the standards of cleanliness and tidiness required when working in the workshop, on site or on hirer's/client's premises
 - ◆ the procedures you should follow in relation to cleaning, tidying, removal of hazardous and non-hazardous materials, substances, fluids and the fixed and portable equipment you need
 - ◆ types of obstruction that can affect a work area:
 - discarded components, waste materials, importance of keeping work area free from obstruction
 - ◆ the types of disruptions that can occur when preparing work area:
 - other more important work brought in to the work area
 - previous work not completed
 - inclement weather (outside conditions)
 - other personnel

Knowledge and Understanding (cont)

- K3 Identification of materials and recognition of defects:
- ◆ how to identify the parts and materials you need for your work and check them to make sure they are fit for purpose and checking for any defects
 - ◆ checks on whether service supplies are ready for use
 - ◆ check services for operation:
 - coolants, fuels, lubricants, fluids, electricity, air
- K4 Material handling and preparation methods and techniques:
- ◆ how to handle the materials and parts and equipment you need
 - ◆ tools and equipment (hand and power)
 - ◆ lifting equipment and lifting aids
- K5 Tool and equipment care and control procedures:
- ◆ how to carry out visual inspections of the fixed and portable equipment you need in your work to ensure their safety and fitness for purpose
 - ◆ preparation methods for specific equipment cleaning, checking operations, maintaining
- K6 Reporting lines and procedures:
- ◆ how to report problems associated with the preparation of work areas in your organisation

UNIT PM08 (DE7G 04)

Maintain the Work Area

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____

Date: _____

Assessor: _____

Date: _____

Internal Verifier: _____

Date: _____

UNIT PM08 (DE7G 04)

Maintain the Work Area

Element 8.2: Reinststate the Work Area after Plant Maintenance Activities

Performance Criteria

You must:

- 1 Work safely at all times, complying with health and safety and other relevant regulations and guidelines.
- 2 Separate equipment, components, and materials for reuse from waste items and materials.
- 3 Store reusable materials and equipment in an appropriate location.
- 4 Dispose of waste materials in line with organisational and environmentally safe procedures.
- 5 Restore the work area to a safe condition in accordance with agreed requirements and schedules.
- 6 Deal promptly and effectively with problems within your control and report those that cannot be solved.

Scope of Performance

This should cover:

- 1 Level and extent of responsibility:
 - ◆ for this standard responsibility extends to restoring the work to a clean and tidy state in accordance with the job requirements
- 2 Nature and complexity of work area to be restored:
 - ◆ employer's premises
 - ◆ site
 - ◆ client's/hirer's premises
- 3 Resources to be stored:
 - ◆ parts and components
 - ◆ fuels, lubricants, coolants, fluids
 - ◆ reusable items
- 4 Disposal of hazardous and non-hazardous materials:
 - ◆ waste oil, fuels, grease, coolants, chemicals, solvents
 - ◆ non-hazardous materials, packaging, used parts, components, materials

UNIT PM08 (DE7G 04)

Maintain the Work Area

Element 8.2: Reinstate the Work Area after Plant Maintenance Activities

Knowledge and Understanding

You must have knowledge and understanding of:

- K1 Health and safety legislation, regulations and safe working practices and procedures:
- ◆ relevant parts of the Health and Safety at Work Act 1974, Provision and Use of Work Equipment Regulations, Control of Substances Hazardous to Health Regulations, Electricity at Work Regulations, Manual Handling Operations Regulations, Lifting Operations and Lifting Equipment Regulations, your company's health and safety policies and procedures for your workplace
 - ◆ use of personal protective equipment
- K2 Work area restoration requirements:
- ◆ standards of cleanliness and tidiness when restoring the work area
 - ◆ types of requirements of users of the work area
 - ◆ types of waste material generated when carrying out work on plant and equipment
 - ◆ lubricants, fluids, coolants, fuels, dust, earth, sand, used parts/components, packaging
 - ◆ removal of hazards from oil, grease, fuel, coolants, fluids, dirt, earth, sand
 - ◆ use of cleaning equipment to restore work area — high pressure washing equipment, manual and mechanical cleaning equipment, absorbent material, chemicals
 - ◆ spillages of substances and how to deal with them

Knowledge and Understanding (cont)

- K3 Material and equipment stores procedures:
- ◆ which equipment and materials can be reused
 - ◆ tools and workshop equipment
 - ◆ reusable parts and components:
 - nuts, bolts, washers, fastenings, pins etc
 - ◆ storage procedures for specific resources:
 - flammable or explosive materials
 - external in an enclosure
 - external in a purpose-built store
 - degradable materials
 - internal in a storage area
 - ◆ correct positions for different resources:
 - shelving, racking, designated area
- K4 Waste disposal methods and procedures:
- ◆ your organisation's procedures and instructions for dealing with and disposing of waste materials, substances and components (hazardous and non-hazardous):
 - hazardous: in sealed containers and/or bags
 - non-hazardous: in dustbins or designated refuse bins/containers
- K5 Reporting lines and procedures:
- ◆ who to report to
 - ◆ how to report any problems associated with restoring work areas

UNIT PM08 (DE7G 04)

Maintain the Work Area

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____

Date: _____

Assessor: _____

Date: _____

Internal Verifier: _____

Date: _____

UNIT PM08 (DE7G 04)

Maintain the Work Area

Element 8.3: Store Resources for Further Use

Performance Criteria

You must:

- 1 Work safely at all times, complying with health and safety and other relevant regulations and guidelines.
- 2 Determine how the resources are to be stored.
- 3 Use correct safe handling techniques.
- 4 Remove and dispose of all unnecessary packaging equipment.
- 5 Store resources safely in a suitable position in the appropriate storage location.
- 6 Clearly identify the stored resources and complete any necessary documentation.
- 7 Deal promptly and effectively with problems within your control and report those that cannot be solved.

Scope of Performance

This should cover:

- 1 Level and extent of responsibility:
 - ◆ for this standard the candidate will be required during, and on the completion of work, to identify and select resources which can be stored for further use and dispose of waste materials and substances
- 2 Storage environment:
 - ◆ workshop stores
 - ◆ enclosures (outside and inside)
 - ◆ designated open spaces
- 3 Handling techniques and procedures:
 - ◆ manual lifting
 - ◆ use of lifting and handling aids
- 4 Type of resources to be stored:
 - ◆ consumables (eg lubricants, coolants, fluids, parts, components)
 - ◆ non-consumables (tools, equipment)
- 5 Record-keeping systems:
 - ◆ manual and/or computer-based as per organisational requirements

UNIT PM08 (DE7G 04)

Maintain the Work Area

Element 8.3: Store Resources for Further Use

Knowledge and Understanding

You must have knowledge and understanding of:

- K1 Health and safety legislation, regulations and safe working practices and procedures:
- ◆ relevant parts of the Health and Safety at Work Act 1974, Provision and Use of Work Equipment Regulations, Control of Substances Hazardous to Health Regulations, Electricity at Work Regulations, Manual Handling Operations Regulations, Lifting Operations and Lifting Equipment Regulations, your company's health and safety policies and procedures for your workplace
 - ◆ use of personal protective equipment
- K2 Storage methods and procedures for tools and equipment:
- ◆ which equipment, components and materials can be reused:
 - tools and workshop equipment
 - reusable parts and components
 - reusable consumables: nuts, bolts, washers, pins etc
 - unused components
 - ◆ storage procedures for specific resources:
 - flammable and explosive materials in enclosures and purpose-built areas (external)
 - ◆ degradable materials:
 - internal in storage areas

Knowledge and Understanding (cont)

- K3 Waste disposal methods and procedures:
- ◆ your organisation's procedures for dealing with and disposing of waste materials and substances:
 - hazardous: in sealed containers in bags
 - non-hazardous: in dustbins or designated refuse bins/containers
- K4 Reporting lines and procedures:
- ◆ who to report to
 - ◆ how to report any problems associated with storing equipment and materials

UNIT PM08 (DE7G 04)

Maintain the Work Area

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____

Date: _____

Assessor: _____

Date: _____

Internal Verifier: _____

Date: _____

UNIT PM09 (DE7A 04)

Inspect Plant and Equipment for Operational Serviceability

Unit Summary

This Unit refers to the competence required by a plant mechanic to carry out routine inspections on plant machinery and equipment and their associated systems and components in accordance with manufacturer's requirements and organisation specifications. It also includes identifying and recognising defects and faults, to check whether or not the plant machinery and equipment is fit for operational serviceability, or whether further or more detailed inspections and examinations are required.

UNIT PM09 (DE7A 04)

Inspect Plant and Equipment for Operational Serviceability

Performance Criteria

You must:

- 1 Work safely at all times, complying with health and safety and other relevant regulations and guidelines.
- 2 Follow the correct specification for the product or equipment being inspected.
- 3 Use the correct equipment to carry out the inspection.
- 4 Identify and confirm the inspection checks to be made and acceptance criteria to be used.
- 5 Carry out all required inspections as specified.
- 6 Identify any defects or variations from the specification.
- 7 Record the results of the inspection in the appropriate format.
- 8 Deal promptly and effectively with problems within your control and report those that cannot be solved.

Scope of Performance

This should cover:

- 1 Level and extent of responsibility:
 - ◆ for this standard the candidate is required to inspect plant machinery and equipment following clearly defined procedures. In some cases the candidate may still be expected to refer to others for guidance and authorisation even though responsibility for identifying and implementing decisions remains with the candidate
- 2 Type of products to be inspected are those typically used in the construction and allied industries, plant hire and small plant and tool industries and could include:
 - ◆ wheeled plant
 - ◆ tracked plant
 - ◆ static plant
 - ◆ portable plant
 - ◆ small plant
 - ◆ power tools
 - ◆ attachments
 - ◆ ancillary equipment
- 3 Aspects, characteristics and complexity of checks. These could include:
 - ◆ organisational requirements (ie non-complex inspections)
 - ◆ periodic: daily (or routine), weekly, monthly
 - ◆ pre-delivery inspections
 - ◆ post-repair inspections
 - ◆ these inspections would usually be carried out on employers' premises/workshops but would occasionally be carried out:
 - on site or on client's/hirer's premises

UNIT PM09 (DE7A 04)

Inspect Plant and Equipment for Operational Serviceability

Scope of Performance (cont)

- 4 Inspection methods and techniques and type of equipment to be used:
- ◆ visual inspections
 - ◆ carrying out functional and operational tests
 - ◆ off-hire inspections
 - ◆ inspection of returned items of plant and equipment
 - ◆ using hand tools and specialist tools and equipment
 - ◆ correcting minor defects
 - ◆ recording inspection findings
- 5 Quality standards and accuracy to be achieved:
- ◆ in accordance with manufacturer's and/or organisational requirements
 - ◆ statutory requirements
 - ◆ relevant Codes of Practice

Knowledge and Understanding

You must have knowledge and understanding of:

- K1 Health and safety legislation, regulations and safe working practices and procedures:
- ◆ relevant parts of the Health and Safety at Work Act 1974, Provision and Use of Work Equipment Regulations, Control of Substances Hazardous to Health Regulations, Electricity at Work Regulations, Manual Handling Operations Regulations, Lifting Operations and Lifting Equipment Regulations, your company's health and safety policies and procedures for your workplace
- K2 Engineering drawings and related specifications:
- ◆ manufacturer's specifications and technical literature
 - ◆ organisational procedures and specifications
- K3 Inspection methods and techniques
- ◆ How to conduct:
 - daily/weekly checks for routine inspection
 - visual inspections
 - periodic inspections, eg monthly or number of hours run
 - pre-delivery (Pdi) inspections
 - off-hire inspections
 - returned items of plant and equipment
- K4 Calibration of equipment and authorisation procedures:
- ◆ your organisation's procedures for the calibrating of equipment and gaining authorisation for uses

UNIT PM09 (DE7A 04)

Inspect Plant and Equipment for Operational Serviceability

Knowledge and Understanding (cont)

- K5 Inspection equipment care and control procedures:
- ◆ your organisation's instructions and procedures for the use and care of specialist inspection equipment and test and diagnostic aids
- K6 Identification of defects in products, equipment or systems:
- ◆ typical defects that occur with specific plant machinery and equipment:
 - deterioration of equipment
 - damage or excessive wear
 - leaking fluids and substances
 - ◆ what constitutes critical and non-critical defects:
 - critical: safety problems, serious defects
 - non-critical: minor defects or adjustments
 - ◆ typical defects could include:
 - rusting and rotting materials
 - wear and damage to components and parts
 - cracked, loose, broken or missing parts and components, linkages
 - fuel, fluid, coolant, oil leaks and exhaust leaks
 - damaged tyres, tracks
 - worn seals on components and system components
- K7 Quality control systems and documentation procedures:
- ◆ inspection of equipment at specified intervals
 - ◆ organisational form/checklists (eg off-hire checklist)
 - ◆ organisational procedures for carrying out further detailed inspections and examinations.

Knowledge and Understanding (cont)

- K8 Reporting lines and procedures:
- ◆ your organisation's procedures for recording findings from inspections
 - ◆ who should be informed of the results of the findings or if further 'in depth' inspections and examinations are required:
 - colleagues
 - supervisor
 - line manager
 - client/end-user

UNIT PM09 (DE7A 04)

Inspect Plant and Equipment for Operational Serviceability

Notes/Comments



The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____

Date: _____

Assessor: _____

Date: _____

Internal Verifier: _____

Date: _____

UNIT PM10 (DE72 04)

Diagnose Faults in Plant Equipment Systems and Components

Unit Summary

This Unit refers to the competence required by a plant mechanic/service engineer to identify and diagnose faults and problems in plant machinery and equipment and their associated systems and components, using a combination of diagnostic techniques and suitable test equipment.

UNIT PM10 (DE72 04)

Diagnose Faults in Plant Equipment Systems and Components

Performance Criteria

You must:

- 1 Work safely at all times, complying with health and safety and other relevant regulations and guidelines.
- 2 Review and use all relevant information on the symptoms and problems associated with the products or assets.
- 3 Investigate and establish the most likely causes of the faults.
- 4 Select, use and apply diagnostic techniques, tools and aids to locate faults.
- 5 Complete the fault diagnosis within the agreed time and inform the appropriate people when this cannot be achieved.
- 6 Determine the implications of the fault for other work and for safety considerations.
- 7 Use the evidence gained to draw valid conclusions about the nature and probable cause of the fault.
- 8 Record details on the extent and location of the faults in an appropriate format.

Scope of Performance

This should cover:

- 1 Level and extent of responsibility:
 - ◆ for this standard the candidate's responsibility extends to acting on information received and identifying problems associated with the function and operation of plant machinery and equipment and their associated systems and components. Being able to select the diagnostic procedures appropriate to the problem identified. In some cases the candidate may still be expected to refer to others for final authorisation even though responsibility for identifying and implementing decisions remains with the candidate
- 2 Type of product or asset investigated:
 - ◆ construction plant, small plant, power tools and their associated systems and components which could include the following:
 - power units (compression ignition, spark ignition)
 - hydraulic components and systems
 - pneumatic components and systems
 - electrical, electronic components and systems
 - steering, braking
 - operating systems
- 3 Type of fault finding techniques or procedures, diagnostic aids and equipment:
 - ◆ sensory
 - ◆ electronic
 - ◆ electrical
 - ◆ mechanical
 - ◆ hydraulic
 - ◆ extracting information from end users
 - ◆ functional testing

UNIT PM10 (DE72 04)

Diagnose Faults in Plant Equipment Systems and Components

Scope of Performance (cont)

- 4 Type and range of problems and faults:
 - ◆ continual faults
 - ◆ intermittent
 - ◆ breakdowns
- 5 Level and complexity of diagnosis:
 - ◆ routine
 - ◆ non-routine
- 6 Record-keeping systems and procedures:
 - ◆ organisational recording systems
 - ◆ manual/electronic

Knowledge and Understanding

You must have knowledge and understanding of:

- K1 Health and safety legislation, regulations and safe working practices and procedures:
 - ◆ relevant parts of the Health and Safety at Work Act 1974, Provision and Use of Work Equipment Regulations, Control of Substances Hazardous to Health Regulations, Electricity at Work Regulations, Manual Handling Operations Regulations, Lifting Operations and Lifting Equipment Regulations, your company's health and safety policies and procedures for your workplace
 - ◆ use of personal protective equipment
- K2 Fault diagnostic aids, ie those used on the plant and equipment you work on to assist with diagnosing faults:
 - ◆ multimetres
 - ◆ pressure/flow gauges
 - ◆ computerised diagnostic tools/aids
 - ◆ test lamps
 - ◆ portable appliance testing equipment
 - ◆ other specialist tools and equipment
- K3 Fault finding methods and techniques:
 - ◆ use of senses to diagnose faults in plant and equipment, eg visual checking, sounds, smells
 - ◆ manufacturer's guidelines for fault finding methods and techniques
- K4 Analysis methods and techniques:
 - ◆ how to collect and analyse data from diagnostic aids and own observation and compare this with your knowledge of systems and manufacturer's technical information to diagnose faults

UNIT PM10 (DE72 04)

Diagnose Faults in Plant Equipment Systems and Components

Knowledge and Understanding (cont)

- K5 Test equipment operating and care and control procedures:
 - ◆ the manufacturer's instructions for test equipment: operating, care and control, in particular cleaning and storage
- K6 Assessing likely risks arising from faults:
 - ◆ safety, economic and legal — arising from faults
 - ◆ company and manufacturer's maintenance reporting documentation and control procedures
- K7 Maintenance reporting documentation and control procedures:
 - ◆ your organisation's documentation requirements for maintenance and control
- K8 Reporting lines and procedures:
 - ◆ organisational reporting lines and procedures when carrying out fault diagnosis on plant machinery and equipment

UNIT PM10 (DE72 04)

Diagnose Faults in Plant Equipment Systems and Components

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____

Date: _____

Assessor: _____

Date: _____

Internal Verifier: _____

Date: _____

UNIT PM11 (DE7P 04)

Repair Plant Equipment by Soldering and Welding

Unit Summary

The competence required to achieve this Unit extends to identifying and implementing what welding and soldering processes are required to carry out repairs to plant and equipment and their associated components. It also includes cleaning and preparing ferrous and non-ferrous metals for joints for the welding or soldering process to be used.

UNIT PM11 (DE7P 04)

Repair Plant Equipment by Soldering and Welding

Performance Criteria

You must:

- 1 Work safely at all times, complying with health and safety and other relevant regulations and guidelines.
- 2 Follow the relevant joining procedure and job instructions.
- 3 Check that the joint preparation complies with the specification.
- 4 Check that joining and related equipment and consumables are as specified and fit for purpose.
- 5 Make the joints as specified using the appropriate thermal joining technique.
- 6 Produce joints of the required quality and of specified dimensional accuracy.
- 7 Shut down the equipment to a safe condition on completion of joining activities.
- 8 Deal promptly with excess and waste materials and temporary attachments, in line with approved and agreed procedures.
- 9 Deal promptly and effectively with problems within your control and report those that cannot be solved.

Scope of Performance

This should cover:

- 1 Level and extent of responsibility:
 - ◆ for this standard extends to following instructions and implementing the necessary welding and soldering of material associated with plant machinery and equipment. In some cases you may be expected to refer to others for final authorisation
- 2 Joining process and procedures to be used:
 - ◆ high temperature: fusion welding
 - ◆ low temperature: soldering
- 3 Joining equipment:
 - ◆ oxyacetylene gas
 - ◆ manual metal arc
 - ◆ manual inert gas
 - ◆ electrical soldering tools
 - ◆ soldering coppers (irons)
- 4 Type and complexity of joint
 - ◆ fillet
 - ◆ butt
 - ◆ lap
- 5 Materials to be used:
 - ◆ ferrous metals (up to 6mm thick)
 - ◆ non-ferrous

UNIT PM11 (DE7P 04)

Repair Plant Equipment by Soldering and Welding

Scope of Performance (cont)

- 6 Joining positions, access and environmental conditions:
- ◆ joining materials by welding in flat position and ‘in position’ on plant equipment
 - ◆ soldering in flat position and ‘in position’ on plant equipment
 - ◆ carried out on employer’s premises on site
 - ◆ customer’s/hirer’s premises
 - ◆ access
 - readily accessible
 - restricted access
- 7 Quality standards and dimensional accuracy:
- ◆ fit for purpose
 - ◆ to original design
 - ◆ in accordance with BS 4872 part 1, drawings within specified tolerances

Knowledge and Understanding

You must have knowledge and understanding of:

- K1 Health and safety legislation, regulations and safe working practices and procedures:
- ◆ relevant parts of the Health and Safety at Work Act 1974, Provision and Use of Work Equipment Regulations, Control of Substances Hazardous to Health Regulations, Electricity at Work Regulations, Manual Handling Operations Regulations, Lifting Operations and Lifting Equipment Regulations, your company’s health and safety policies and procedures for your workplace
 - ◆ use of personal protective equipment
 - ◆ safe handling of sharp and hot materials/fluxes
 - ◆ requirements for fume extraction and fire precautions and procedures
- K2 Specifications and joining procedures:
- ◆ specifications/preparation and joining procedures for fusion welding of steel sheet and plate materials by both butt and fillet welds using high temperature techniques
 - ◆ joining procedures for soft soldering and different types of joint
- K3 Thermal joining processes and equipment:
- ◆ use of oxyacetylene, manual metal arc, manual inert gas and soft soldering for welding/cutting and joining processes and the equipment used

UNIT PM11 (DE7P 04)

Repair Plant Equipment by Soldering and Welding

Knowledge and Understanding (cont)

- K4 Material handling, preparation and finishing methods and techniques:
- ◆ procedures to be followed when handling sharp edges and hot materials, cutting steel materials to size and shape, joint preparation
 - ◆ techniques (eg relating to the types of joint, material thickness, gaps, measuring, pre-treating, cleaning, cutting, positioning, tacking and welding)
 - ◆ materials and their joining characteristics:
 - ferrous and non-ferrous materials and their joining characteristics when using fusion and non-fusion techniques
- K5 Equipment setting, operating and care procedures:
- ◆ how to set oxyacetylene and manual/gas flow, metal-arc equipment, in particular gas pressures/nozzle sizes, amperage, voltage and selection of weld rods or electrodes, mig wire, mig wire speed settings and tests
- K6 Quality control and test procedures for detection of defects in joints:
- ◆ visual examination of soldered joints, welds: weld contour, undercut and incomplete filling, smoothness of joints where welding is re-started, penetration in butt joints welded from one side only, surface defects
- K7 Personal approval tests:
- ◆ destructive and non-destructive approved tests to be used on different types of joints

Knowledge and Understanding (cont)

- K8 Hazards arising from joining operations, in particular:
- ◆ fumes in open and restricted areas
 - ◆ explosions
 - ◆ flashbacks from equipment
 - ◆ fire
 - ◆ personal injury through burns
 - ◆ ‘arc eye’ caused through welding arc flash (to those who are welding and especially to others in the vicinity)
- K9 Reporting lines and procedures:
- ◆ your organisation’s reporting lines and procedures when carrying out soldering and welding activities on plant machinery and equipment

UNIT PM11 (DE7P 04)

Repair Plant Equipment by Soldering and Welding

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____

Date: _____

Assessor: _____

Date: _____

Internal Verifier: _____

Date: _____

UNIT PM12 (DE7K 04)

Produce One-off Components to Assist Plant and Equipment Activities

Unit Summary

This Unit refers to the competence required to make one-off components to suit needs arising when carrying out maintenance and repair activities on plant machinery and equipment. The components may be needed for temporary use until a more permanent replacement can be made, or may be expected to be used on a permanent basis. This includes working on his/her own initiative to determine the need for a one-off component and then to provide that component whether it is fit for purpose or matching it as closely to relevant specifications for the type and use of component.

UNIT PM12 (DE7K 04)

Produce One-off Components to Assist Plant and Equipment Activities

Performance Criteria

You must:

- 1 Work safely at all times, complying with health and safety and other relevant regulations and guidelines.
- 2 Follow instructions and any relevant specifications to produce the component.
- 3 Produce the required components using appropriate manufacturing methods and techniques.
- 4 Check that the finished component meets the requirements and make any necessary adjustments.
- 5 Deal promptly and effectively with problems within your control and report those that cannot be solved.

Scope of Performance

This should cover:

- 1 Level and extent of responsibility:
 - ◆ for this standard requires the candidate to work on their own initiative to determine the need for a one-off component and then to provide that component matching it as closely as possible to relevant specifications for the type and use of the component. In some cases the candidate may still be expected to refer to others for advice and final authorisation even though identifying and implementing decisions remain with the candidate
- 2 Circumstances requiring one-off component manufacture :
 - ◆ for plant maintenance and repair situations and could include:
 - emergency requirements (safety and operational)
 - fit for purpose
 - replacing existing components
 - modifying existing components
 - ◆ where there are time delays for suitable components to be obtained
 - ◆ whether the component to be made will need to be temporary or permanent
 - ◆ availability of manufacturers' components
 - ◆ cost-effectiveness
 - ◆ when other components become obsolete

UNIT PM12 (DE7K 04)

Produce One-off Components to Assist Plant and Equipment Activities

Scope of Performance (cont)

- 3 Manufacturing methods and techniques to be used:
- ◆ manufacture of the component may involve the use of several techniques and/or the need to go through one stage of production, typical examples could include:
 - fabrication
 - welding
 - machining
 - assembling
 - filing
 - cutting (regular and irregular shapes)
 - fitting
 - drilling
 - cutting and tapping threads
- 4 Type and complexity of shape and components to be produced would be achieved:
- ◆ through marking out (using measurers and marking equipment)
 - ◆ working from drawings or sketches
 - ◆ working from a pattern or representative work piece/components
 - ◆ using powered tools and equipment (static and portable)
 - ◆ using hand tools and specialist tools
- 5 Quality standards and accuracy to be achieved:
- ◆ within tolerances and specification
 - ◆ fit for purpose
- 6 Materials to be used, typical examples could include:
- ◆ carbon steel (sheet, bar, plate)
 - ◆ aluminum and other non-ferrous metals
 - ◆ plastic
 - ◆ composites

Knowledge and Understanding

You must have knowledge and understanding of:

- K1 Health and safety legislation, regulations and safe working practices and procedures:
- ◆ relevant parts of the Health and Safety at Work Act 1974, Provision and Use of Work Equipment Regulations, Control of Substances Hazardous to Health Regulations, Electricity at Work Regulations, Manual Handling Operations Regulations, Lifting Operations and Lifting Equipment Regulations, your company's health and safety policies and procedures for your workplace
- K2 Engineering drawings and related specifications:
- ◆ information sources:
 - workshop manuals, parts manuals
 - manufacturer's specifications
 - representative work pieces/templates
- K3 Reasons for one-off components — the factors that make it appropriate to produce one-off components:
- ◆ fit for purpose
 - ◆ operational requirements
 - ◆ downtime of plant machinery and equipment
 - ◆ availability of manufacturer's components
 - ◆ time delay for suitable components to be obtained
 - ◆ emergency measures
 - ◆ whether the component to be produced will be temporary or permanent
 - ◆ is it cost effective to produce your own components
 - ◆ durability
 - ◆ safety

UNIT PM12 (DE7K 04)

Produce One-off Components to Assist Plant and Equipment Activities

Knowledge and Understanding (cont)

- K4 Production of components in the absence of specifications:
- ◆ what level of detail will need to be established:
 - external and internal dimension
 - hole spacing and diameters
 - ◆ types of materials to be used:
 - ferrous, non-ferrous materials
 - ◆ use for one-off components
 - other components from which detail can be taken
- K5 Manufacturing methods and techniques:
- ◆ modification of existing components:
 - shaping, cutting, drilling, filing, threading (internal and external)
 - fabricating and welding
 - machining
 - finishing requirements
 - ◆ types of problems that can occur when making one-off components and how they can be rectified:
 - lack of suitable materials
 - lack of equipment and facilities
 - time constraints
 - incorrect finishing to specification
- K6 Selection of materials with respect to the component application:
- ◆ types of materials to be selected and used for the application:
 - steel, alloys, plastic
 - ◆ other components to which the one-off component(s) manufactured should fit to:
 - flanges: square, aligned
 - bolt hole alignment

Knowledge and Understanding (cont)

- assemblies and sub-assemblies of plant machinery and equipment
 - differing mating surfaces (eg aluminium to cast steel)
 - ◆ methods of securing the one-off component(s) to other component(s) and when and how they should be applied:
 - bolting
 - screwing
 - clamping
 - riveting
 - joining (thermally or by adhesives)
 - need for specialist retaining devices
- K7 Tool and equipment care and control procedures:
- ◆ your organisation's procedures for the protection and storage of materials, tools and equipment for care, control and security measures
 - ◆ dealing with excess materials:
 - recovering useable materials
 - storage for reuse
 - disposing of waste materials
- K8 Reporting lines and procedures:
- ◆ recording information on the one-off component(s) made:
 - for future reference
 - organisational procedures and requirements
 - ◆ contacts for advice when needed:
 - colleagues
 - supervisors
 - technical support

UNIT PM12 (DE7K 04)

Produce One-off Components to Assist Plant and Equipment Activities

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____

Date: _____

Assessor: _____

Date: _____

Internal Verifier: _____

Date: _____

UNIT PM13 (DE7H 04)

Move Standard Loads

Unit Summary

This Unit refers to the competence involved in preparing and moving loads in a plant maintenance and repair work environment. You must be able to assess loads of various types, size and shape and choose the safest and most effective method of moving and lifting a load, and controlling the movement and placing of the load to its intended destination/location. This Unit includes both manually lifting and moving equipment and using manual lifting aids. It does not include using equipment where a separate competence is required to operate and drive specific machines (eg lift truck, mobile crane).

Element 13.1: Prepare Loads for Moving

Element 13.2: Move Loads

UNIT PM13 (DE7H 04)

Move Standard Loads

Element 13.1: Prepare Loads for Moving

Performance Criteria

You must:

- 1 Work safely at all times, complying with health and safety and other relevant regulations and guidelines.
- 2 Establish the weight of the load to be moved.
- 3 Determine the method and select suitable equipment to move the load.
- 4 Check that the equipment to be used is capable of moving the load safely.
- 5 Determine a suitable route for moving the load minimising risk to people and property.
- 6 Ensure that the load is secured and protected before moving operations start.
- 7 Deal promptly and effectively with problem within your control and report those that cannot be solved.

Scope of Performance

This should cover:

- 1 Moving methods and techniques:
 - ◆ manual lifting/moving and lifting aids and appliances
- 2 Type of lifting, moving and handling equipment to be used:
 - ◆ typical types of moving, handling and equipment used could include:
 - trolleys (powered/manual)
 - rollers
 - winches and hoists
 - pulley and chain blocks
 - skids
 - jacks (mechanical/hydraulic)
 - ropes (wire/fabric)
 - cranes (powered/manual)
 - pull lifts
- 3 Characteristics of the load to be moved:
 - ◆ regular and irregular shaped loads of even and uneven weight distribution with accessible lifting points
 - ◆ typical loads to be prepared for movement could include:
 - engines
 - gearboxes, final drives
 - items of small/medium plant and equipment
 - components and parts
 - bagged/boxed materials and components
 - ancillary components
 - attachments

UNIT PM13 (DE7H 04)

Move Standard Loads

Element 13.1: Prepare Loads for Moving

Scope of Performance (cont)

- 4 Type of location:
- ◆ workshop
 - ◆ site
 - ◆ client's/hirer's premises
- Final destination:
- ◆ on transport vehicles
 - ◆ on/in plant and equipment
 - ◆ other areas within workshop/site, client/hirer's premises

Knowledge and Understanding

You must have knowledge and understanding of:

- K1 Health and safety legislation, regulations and safe working practices and procedures:
- ◆ relevant parts of the Health and Safety at Work Act 1974, Provision and Use of Work Equipment Regulations, Control of Substances Hazardous to Health Regulations, Electricity at Work Regulations, Manual Handling Operations Regulations, Lifting Operations and Lifting Equipment Regulations, your company's health and safety policies and procedures for your workplace
 - ◆ use of personal protective equipment
- K2 Lifting, moving and handling equipment methods and techniques:
- ◆ when it is not appropriate to move a load manually:
 - large and bulky
 - heavy
 - up and down slopes
 - uneven ground
 - ◆ types of moving equipment and lifting aids used for different types of load:
 - levers, jacks, rollers, hoists, manual cranes (hydraulic/mechanical)
 - pallet loaders
 - platform loaders
 - chain blocks
 - winches, hoists
 - slings
 - ropes

UNIT PM13 (DE7H 04)

Move Standard Loads

Element 13.1: Prepare Loads for Moving

Knowledge and Understanding (cont)

- K3 Establishing the weight of loads:
- ◆ how to estimate the weight of loads commonly used in plant maintenance and repair activities
 - ◆ organisational specification/charts
 - ◆ workshop manual
 - ◆ manufacturers' information
 - ◆ delivery sheets
 - ◆ labels
- K4 Slinging and lifting methods and techniques:
- ◆ lifting points, balance determining sling angles
 - ◆ weight to be lifted
 - ◆ safe working load of slings
 - ◆ use of multiple slings
 - ◆ use of chains
 - ◆ use of any specialist lifting accessories
 - ◆ the identification markings and SWL of the lifting accessories and any limitations to their use
 - ◆ using approved signals
- K5 Lifting equipment care and control procedures:
- ◆ carrying out visual checks on lifting and moving equipment and accessories to determine their safety and use for lifting gear and accessories that are not certificated and your organisation's procedures for dealing with them
 - ◆ your organisation's procedures for storing and securing moving and lifting gear and accessories

Knowledge and Understanding (cont)

- K6 Route planning methods and techniques:
- ◆ how to plan safe routes for moving equipment and components in your workplace, on site and other locations taking into account:
 - any hazards which could arise from other work activities
 - any obstructions
 - overhead services
 - works and public traffic
 - weather, visibility
 - ground conditions
 - access and egress
 - floor loading
 - workplace risk assessments
- K7 Reporting lines and procedures:
- ◆ your organisation's reporting lines and procedures associated with the preparation and moving of loads

UNIT PM13 (DE7H 04)

Move Standard Loads

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____

Date: _____

Assessor: _____

Date: _____

Internal Verifier: _____

Date: _____

UNIT PM13 (DE7H 04)

Move Standard Loads

Element 13.2: Move Loads

Performance Criteria

You must:

- 1 Work safely at all times, complying with health and safety and other relevant regulations and guidelines.
- 2 Position the moving equipment so that the weight of the load is evenly distributed.
- 3 Attach the appropriate handling equipment securely to the load, using approved methods to eliminate slippage.
- 4 Confirm that the load is secure before moving.
- 5 Move the load over the selected, suitable route.
- 6 Position and release the load safely in its intended final location.

Scope of Performance

This should cover:

- 1 Level and extent of responsibility:
 - ◆ for this standard covers the assessment of loads and selection of methods and equipment used for the move. Movement of the load will be in accordance with the specific job requirements. In some cases the candidate may still be expected to refer to others for final authorisation (eg chargehand/supervisor)
- 2 Moving methods and techniques to be used:
 - ◆ manual lifting/moving and lifting aids and appliances
- 3 Type of lifting, moving and handling equipment to be used:
 - ◆ typical types of moving, handling and equipment used could include:
 - trolleys (powered/manual)
 - rollers
 - winches and hoists
 - pulley and chain blocks
 - skids
 - jacks (mechanical/hydraulic)
 - ropes (wire/fabric)
 - cranes (powered/manual)
 - pull lifts

UNIT PM13 (DE7H 04)

Move Standard Loads

Element 13.2: Move Loads

Scope of Performance (cont)

- 4 Type and characteristics of the load to be moved:
- ◆ regular and irregular shaped loads of even and uneven weight distribution
 - ◆ with accessible lifting points
 - ◆ typical loads to be prepared for movement could include:
 - engines
 - gearboxes, final drives
 - items of small/medium plant and equipment
 - components and parts
 - bagged/boxed materials and components
 - ancillary components
 - attachments
- 5 Type of location:
- ◆ workshop
 - ◆ site
 - ◆ client's/hirer's premises
- Final destination of load:
- ◆ on transport vehicles
 - ◆ on/in plant and equipment
 - ◆ other areas within workshop/site

Knowledge and Understanding

You must have knowledge and understanding of:

- K1 Health and safety legislation, regulations and safe working practices and procedures:
- ◆ relevant parts of the Health and Safety at Work Act 1974, Provision and Use of Work Equipment Regulations, Control of Substances Hazardous to Health Regulations, Electricity at Work Regulations, Manual Handling Operations Regulations, Lifting Operations and Lifting Equipment Regulations, your company's health and safety policies and procedures for your workplace
 - ◆ use of personal protective equipment
 - ◆ safe handling of sharp and hot materials/fluxes
 - ◆ requirements for fume extraction and fire precautions and procedures
 - ◆ specific health and safety issues relating to the movement of loads:
 - slipping loads
 - overturning of loads
 - dropping of loads
 - striking other equipment, fixtures, personnel
- K2 Methods and techniques of moving loads:
- ◆ manual lifting techniques and procedures (single or team lifting)
 - ◆ use of powered equipment to move and place the load
 - ◆ following safe systems of work for the movement of loads
 - ◆ securing and containing the load to be moved

UNIT PM13 (DE7H 04)

Move Standard Loads

Element 13.2: Move Loads

Knowledge and Understanding (cont)

- K3 Lifting, moving and handling equipment used when moving loads:
- ◆ implementing your organisation's specific procedures for moving certain types of load and using the appropriate handling techniques (manual and power assisted) and equipment to move the load:
 - levers
 - jacks
 - rollers
 - manual cranes(mechanical/hydraulic)
 - pallet loaders
 - platform loaders
 - chain blocks
 - pull lifts
 - winches, hoists
 - slings
 - ropes
- K4 Load assessment methods and techniques:
- ◆ how to assess loads according to their shape, size, fragility, stability and balance
- K5 Route planning methods and techniques:
- ◆ how to plan safe routes for moving equipment and components in your workplace, on site and other locations taking into account:
 - any hazards which could arise from other work activities
 - any obstructions
 - overhead services
 - works and public traffic
 - weather, visibility

Knowledge and Understanding (cont)

- ground conditions
 - access and egress
 - floor loading
 - workplace risk assessments
- K6 Handling equipment operating and care and control procedures:
- ◆ methods of attaching handling equipment to loads:
 - rings
 - 'D' shackles, bow shackles
 - straps
 - slings
 - chains
 - special lifting eye
 - spreader beams
 - ◆ ensuring all lifting gear and accessories are certified for use
 - ◆ methods and materials that can be used to protect a load during transportation:
 - wood
 - rubber
 - plastic
 - edge protection for slings and chains
 - ◆ purpose and importance of carrying out trial lifts, dummy runs prior to moving the load
 - ◆ how loads can slip during movement:
 - slack straps/slings
 - uneven weight distribution
 - centre of gravity too high
- K7 Reporting lines and procedures:
- ◆ your organisation's reporting lines and procedures associated with the movement of loads

UNIT PM13 (DE7H 04)

Move Standard Loads

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____

Date: _____

Assessor: _____

Date: _____

Internal Verifier: _____

Date: _____

UNIT PM14 (DE7F 04)

Install Plant and Equipment for Operational Activities

Unit Summary

This Unit refers to the competence involved in interpreting specifications and instructions for installing plant machinery and equipment on construction sites, hirer's/client's premises. It will also involve selecting and modifying techniques and procedures to achieve the best possible result in the conditions applying and carrying out functional and operational tests on completion of installation activities.

UNIT PM14 (DE7F 04)

Install Plant and Equipment for Operational Activities

Performance Criteria

You must:

- 1 Work safely at all times, complying with health and safety and other relevant regulations and guidelines.
- 2 Follow all relevant drawings and specifications for the installation being carried out.
- 3 Use the correct tools and equipment for the installation operations and check that they are in a safe and usable condition.
- 4 Install, position and secure the equipment and components in accordance with the specifications.
- 5 Ensure that all necessary connections to the equipment are complete.
- 6 Deal promptly and effectively with problems within your control and report those that cannot be solved.
- 7 Check that the installation is complete and that all components are free from damage.

Scope of Performance

This should cover:

- 1 Level and extent of responsibility:
 - ◆ for this unit responsibility extends to the interpretation of specifications and organisational instructions to carry out plant machinery and equipment installations. In some cases the candidate may still be expected to refer to others for final authorization (eg installation team leader/chargehand/supervisor)
- 2 Type of product, asset or equipment to be installed:
 - ◆ typical examples could include:
 - cranes (mobile/static)
 - hoists (passenger/goods)
 - batching plants
 - crushing plants
 - power generation equipment
 - pneumatic air and tool supply equipment
 - power units
 - temporary accommodation
- 3 Installation methods and techniques to be used:
 - ◆ typical methods and techniques could include:
 - drilling and fixing
 - tying into structures
 - securing
 - rigging
 - making male to female plug-in connectors
 - using threaded fasteners
 - routing cable and pipe work
 - erecting and dismantling hoist/crane sections

UNIT PM14 (DE7F 04)

Install Plant and Equipment for Operational Activities

Scope of Performance (cont)

- 4 Type and complexity of connections to be made:
- ◆ there will be a large number of connections and securing points to be made and/or some securing points are difficult to access and are complex to achieve
 - ◆ this will also depend on the installation environment — typical examples could include:
 - site conditions
 - hirer's/clients' premises
 - confined spaces
 - working at height
 - inclement weather
 - working underground
- 5 Quality standards and accuracy to be achieved:
- ◆ in accordance with manufacturer's specifications
 - ◆ your organisation's requirements
 - ◆ job requirements
 - ◆ statutory requirements (where applicable)

Knowledge and Understanding

You must have knowledge and understanding of:

- K1 Health and safety legislation, regulations and safe working practices and procedures:
- ◆ relevant parts of the Health and Safety at Work Act 1974, Provision and Use of Work Equipment Regulations, Control of Substances Hazardous to Health Regulations, Electricity at Work Regulations, Manual Handling Operations Regulations, Lifting Operations and Lifting Equipment Regulations, your company's health and safety policies and procedures for your workplace
 - ◆ use of personal protective equipment
 - ◆ specific health and safety issues relating to installation of plant machinery and equipment:
 - working at height
 - working in confined spaces
 - working underground
 - injuries through falling, slipping, trapping hands, fingers, limbs
- K2 Installation instructions and related specifications:
- ◆ manufacturer's technical literature
 - ◆ your organisation's instructions and procedures for carrying out specific installations
 - ◆ job/site requirements
 - ◆ method statements
 - ◆ risk assessments
 - ◆ safe systems of work
 - ◆ Codes of Practice

UNIT PM14 (DE7F 04)

Install Plant and Equipment for Operational Activities

Knowledge and Understanding (cont)

- K3 Installation equipment, methods and techniques:
- ◆ lifting equipment, mechanical cranes, manufacturer's specialist tools and equipment, lifting accessories or moving equipment
 - ◆ hand and power tools
 - ◆ your organisation's relevant tools and equipment to carry out specific installations
 - ◆ plant machinery and equipment familiarity, ie the machines in your organisation's fleet and the different methods and procedures required
- K4 Installation procedures for products and assets:
- ◆ requirements for preparing areas, locating and siting the plant machinery and equipment to be installed
 - ◆ checking all relevant parts, components, attachments and accessories are available to complete installation
 - ◆ how specific machines and components should be secured ie
 - tied in
 - pinned
 - clamped
 - bolted
 - screwed
 - connected to load-bearing structure(s)
 - ◆ power supply requirements for the specific plant and machinery being installed:
 - self-powered
 - electrical supply
 - ◆ use of manufacturer's installation manuals to assist with the installation

Knowledge and Understanding (cont)

- ◆ methods and equipment which can be used for checking compliance:
 - measuring equipment
 - comparators
 - spirit levels
 - instruments
 - functional operation of plant machinery and equipment on completion of installation
 - ◆ carrying out any in-situ adjustments that may be required
 - ◆ procedures for liaising with site, clients/hirers when carrying out the installation
- K5 Tool and equipment care and control procedures:
- ◆ lifting equipment and lifting accessories, hand and power tool care and storage of tools and equipment in workshop or on site, client's/hirer's premises
 - ◆ types of damage and defect that can occur during an installation:
 - misalignment of components
 - cracked castings/housings
 - leaks/lubricants, fuels, coolants
 - scoring and marking of parts and components
 - breakage
 - ◆ your organisation's instructions and procedures for dealing with damages and defects to plant machinery equipment, associated components and tools and equipment
- K6 Reporting lines and procedures:
- ◆ your organisation's reporting lines and procedures associated with the installation of plant machinery and equipment

UNIT PM14 (DE7F 04)

Install Plant and Equipment for Operational Activities

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____

Date: _____

Assessor: _____

Date: _____

Internal Verifier: _____

Date: _____

UNIT PM15 (DE6L 04)

Carry Out Specific Tests on Plant Equipment

Unit Summary

This Unit refers to the competence required by a plant mechanic/service engineer to carry out tests on plant machinery and equipment to determine operational serviceability and to assist with locating faults in systems and components.

UNIT PM15 (DE6L 04)

Carry Out Specific Tests on Plant Equipment

Performance Criteria

You must:

- 1 Work safely at all times, complying with health and safety and other relevant regulations and guidelines.
- 2 Follow the appropriate procedures for use of tools and equipment to carry out the required tests.
- 3 Set up and carry out the tests using the correct procedures and within agreed timescales.
- 4 Record the results of the tests in the appropriate format.
- 5 Review the results and carry out further tests if necessary.

Scope of Performance

This should cover:

- 1 Level and extent of responsibility:
 - ◆ for this standard it is limited to working within detailed specifications and following clearly defined procedures for carrying out tests on plant and equipment. In some cases the candidate may still be expected to refer to others for guidance and final authorisation, even though responsibility for identifying and implementing decisions remains with the candidate
- 2 Type of products or assets to be tested:
 - ◆ plant and equipment and their associated systems and components as used in the construction and allied industries, plant hire and small plant and tool hire industries
 - ◆ typical examples could include:
 - wheeled plant
 - tracked plant
 - static plant
 - portable plant
 - small plant
 - power tools
 - attachments
 - ancillary equipment
- 3 Type of tools and test equipment to be used:
 - ◆ hand tools
 - ◆ power tools
 - ◆ diagnostic test equipment
 - ◆ mechanical, electrical, electronic

UNIT PM15 (DE6L 04)

Carry Out Specific Tests on Plant Equipment

Scope of Performance (cont)

- 4 Type and complexity of tests to be carried out:
- ◆ using standard equipment
 - ◆ using substitutions and elimination techniques
 - ◆ carried out in workshop (operational and non-operational conditions)
 - ◆ on site, hirer's/clients premises (operational and non-operational conditions)
- 5 Quality standards and accuracy to be achieved:
- ◆ in accordance with manufacturer's specifications
 - ◆ statutory requirements
 - ◆ relevant Codes of Practice

Knowledge and Understanding

You must have knowledge and understanding of:

- K1 Health and safety legislation, regulations and safe working practices and procedures:
- ◆ relevant parts of the Health and Safety at Work Act 1974, Provision and Use of Work Equipment Regulations, Control of Substances Hazardous to Health Regulations, Electricity at Work Regulations, Manual Handling Operations Regulations, Lifting Operations and Lifting Equipment Regulations, your company's health and safety policies and procedures for your workplace
- K2 Engineering test specifications:
- ◆ how to access information on test specifications:
 - manufacturer's technical specifications
 - organisational instructions and procedures
 - machinery/components suppliers
 - ◆ types of detail that are contained in test specifications:
 - measurement
 - compliance
 - readings
 - input and output
 - working cycle times
 - tolerances
 - statutory requirements

UNIT PM15 (DE6L 04)

Carry Out Specific Tests on Plant Equipment

Knowledge and Understanding (cont)

- K3 Types of test equipment and their application:
- ◆ the equipment that you are familiar with and that is used within your organisation:
 - hydraulic pressure and flow gauges
 - multi-meters
 - portable appliance testing equipment
 - computer-aided diagnostics
 - test lamps
 - compression testers
 - timing devices
- K4 Calibration of equipment and authorisation procedures:
- ◆ those as specified by the manufacturer and your organisation
- K5 Testing methods and procedures:
- ◆ tests relating to different aspects of performance and conditions:
 - diagnostic
 - operational
 - functional
 - sensory: visual, audible, touch, smell
- K6 Analysis methods and techniques:
- ◆ which analysis methods and procedures can be applied to test results:
 - knowledge
 - comparisons
 - sensory
 - manufacturer's technical information
 - ◆ types of faults that can be identified by carrying out tests:
 - system faults
 - component faults
 - operational faults

Knowledge and Understanding (cont)

- K7 Environmental controls relating to testing:
- ◆ pollution of atmosphere:
 - gases, fluids, fuels, coolants
 - ◆ containment of fluids, fuels, coolants when carrying out functional and operational tests
- K8 Test reporting documentation and procedures.
- K9 Reporting lines and procedures:
- ◆ your organisation's instructions and procedures associated with the testing of plant and equipment

UNIT PM15 (DE6L 04)

Carry Out Specific Tests on Plant Equipment

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____

Date: _____

Assessor: _____

Date: _____

Internal Verifier: _____

Date: _____

UNIT PM16 (DE6N 04)

Configure Plant and Equipment for Operational Activities

Unit Summary

This Unit refers to the competence required by a plant mechanic/service engineer to configure (and reconfigure where applicable) plant machinery equipment and their associated systems and components in accordance with detailed specifications and specific job requirements.

UNIT PM16 (DE6N 04)

Configure Plant and Equipment for Operational Activities

Performance Criteria

You must:

- 1 Work safely at all times, complying with health and safety and other relevant regulations and guidelines.
- 2 Follow all relevant setting up and operating specifications for the products or assets being configured.
- 3 Follow the defined procedures and set up the equipment correctly ensuring that all operating parameters are achieved.
- 4 Deal promptly and effectively with problems within your control and report those that cannot be solved.
- 5 Check that the configuration is complete and that the equipment operates to specification.
- 6 Complete all relevant documentation accurately and legibly.

Scope of Performance

This should cover:

- 1 Level and extent of responsibility:
 - ◆ for this standard refers to the competence required to configure plant machinery and equipment under situations in which the candidate's responsibility is limited to working within detailed specification and clearly defined procedures. In some cases the candidate may still be expected to refer to other staff (eg colleagues, supervisor) for guidance and final authorisation even though responsibility for identifying and implementing decisions remains with the candidate
- 2 Type of equipment to be configured:
 - ◆ typical examples could include:
 - earth moving equipment (excavators, dozers, scrapers etc)
 - cranes (static/mobile) and other lifting appliances/accessories
 - ancillary equipment
 - material handling equipment
 - batching plant
 - attachments
- 3 Configuration methods, techniques and procedures to be used:
 - ◆ typical methods and procedures could include:
 - removing and replacing components
 - positioning equipment
 - fitting, securing and repositioning sections and attachments
 - assembling and dismantling components
 - carrying out settings and adjustments
 - carrying out functional and operational checks
 - liaising with operators/end users
- 4 Configuration requirements will be in accordance with:
 - ◆ manufacturer's specifications and job requirements
 - ◆ statutory requirements

UNIT PM16 (DE6N 04)

Configure Plant and Equipment for Operational Activities

Knowledge and Understanding

You must have knowledge and understanding of:

- K1 Health and safety legislation, regulations and safe working practices and procedures:
- ◆ relevant parts of the Health and Safety at Work Act 1974, Provision and Use of Work Equipment Regulations, Control of Substances Hazardous to Health Regulations, Electricity at Work Regulations, Manual Handling Operations Regulations, Lifting Operations and Lifting Equipment Regulations, your company's health and safety policies and procedures for your workplace
- K2 Equipment configuration and operating specifications:
- ◆ sources of operating specifications:
 - manufacturer's specifications and guidelines
 - workshop/installation manuals
 - method statements
 - organisational instructions and procedures
 - operator's manual
- K3 Configuration methods, techniques and procedures:
- ◆ your organisation's configuration procedures and instructions and specific machine's/equipment details
 - ◆ client's requirements
 - ◆ manufacturer's recommendations and guidelines
 - ◆ machine/equipment's associated systems and components
 - ◆ actual job requirements
- K4 Equipment operating and care and control procedures:
- ◆ your organisation's procedures and instructions for operating specific items of plant and equipment
 - ◆ safe systems of work

Knowledge and Understanding (cont)

- K5 Recording and documentation procedures:
- ◆ operating machines and equipment safely and efficiently
 - ◆ carrying out functional and operational tests for specific machinery and equipment
 - ◆ what records are kept and why:
 - statutory requirements
 - organisational procedures
 - machine/equipment history file
- K6 Reporting lines and procedures:
- ◆ your organisation's reporting procedures and instructions associated with the configuration and reconfiguration of plant machinery and equipment

UNIT PM16 (DE6N 04)

Configure Plant and Equipment for Operational Activities

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____

Date: _____

Assessor: _____

Date: _____

Internal Verifier: _____

Date: _____

UNIT PM23 (DE78 04)

Hand Over Plant and Equipment to the Control of Others

Unit Summary

This Unit refers to the competence required by a candidate; to liaise with colleagues, customers and end-users and to familiarise them with specific items of plant machinery and equipment by explaining all the necessary operating, safety and emergency requirements to the nominated person(s), and carrying out demonstrations on specific machines for handover purposes. It also includes recording and completing all necessary organisational and statutory documentation associated with the handover procedure.

UNIT PM23 (DE78 04)

Hand Over Plant and Equipment to the Control of Others

Performance Criteria

You must:

- 1 Work safely at all times, complying with health and safety and other relevant regulations and guidelines.
- 2 Confirm and define the condition of the engineering products or assets in accordance with specifications.
- 3 Clearly define and obtain agreement on the moment of transfer of responsibility.
- 4 Communicate handover of control as specified.
- 5 Produce and maintain records of the handover in accordance with organisational procedures.

Scope of Performance

This should cover:

- 1 Level and extent of responsibility:
 - ◆ for this standard responsibility extends to determining and then implementing the handover of plant machinery and equipment to the control of others. In some cases the candidate may still be expected to refer to others for final authorisation even though responsibility for identifying and implementing decisions remains with the candidate
- 2 Type of products or assets are those typically used in the construction and allied industries, plant hire and small plant and tool hire industries and could include:
 - ◆ plant installations, eg hoists, tower cranes, batching plants
 - ◆ wheeled plant
 - ◆ tracked plant
 - ◆ static plant
 - ◆ portable plant
 - ◆ small plant and power tools
 - ◆ attachments
- 3 Handover procedures and environments:
 - ◆ procedures will be in accordance with organisational and statutory requirements
 - ◆ environments are either on site or on:
 - hire premises or employer's premises
 - client's/hirer's premises

UNIT PM23 (DE78 04)

Hand Over Plant and Equipment to the Control of Others

Scope of Performance (cont)

- 4 Parties to hand over to:
- ◆ clients
 - ◆ customers
 - ◆ hirers
 - ◆ colleagues
 - ◆ end-users
- 5 Complexity of handovers:
- ◆ routine
 - ◆ non-routine

Knowledge and Understanding

You must have knowledge and understanding of:

- K1 Health and safety legislation, regulations and safe working practices and procedures:
- ◆ relevant parts of the Health and Safety at Work Act 1974, Provision and Use of Work Equipment Regulations, Control of Substances Hazardous to Health Regulations, Electricity at Work Regulations, Manual Handling Operations Regulations, Lifting Operations and Lifting Equipment Regulations, your company's health and safety policies and procedures for your workplace
- K2 Handover procedures for products or assets:
- ◆ your organisation's handover procedures (and any statutory requirements which must be met) for the specific items of equipment or plant and machinery which is to be handed over, ie:
 - procedures for demonstrating to or familiarising the customer, hirer or end-user with the specific machine's operational controls, mechanism and associated systems
 - the procedures for operating the machinery/equipment safely and correctly
 - the daily/weekly and safety checks which will need to be undertaken
 - the emergency shutdown and isolation procedures for the specific machine
 - any specialist PPE that may be required to accompany the machines or equipment (eg overalls, fall arrest equipment)
 - the responsibilities of organisations and their staff associated with the handover procedure

UNIT PM23 (DE78 04)

Hand Over Plant and Equipment to the Control of Others

Knowledge and Understanding (cont)

- K3 Record and documentation systems and procedures:
- ◆ your organisation's recording documentation systems and procedures
 - ◆ the necessary documentation for the specific machine (or items of equipment) involved in the handover procedure:
 - organisational forms and checklists
 - safety literature
 - operating instructions
 - confirmation/acceptance receipts or forms
 - ◆ why the documentation process is an important and an integral part of the handover procedure
 - ◆ records of test certificates (as applicable to machine/equipment type)
 - statutory register (as applicable to machine types)
 - risk assessments
 - method statements
 - machine/equipment service history file
 - relevant Codes of Practice
 - ◆ the importance of keeping records for all handover procedures undertaken
- K4 Working relationships:
- ◆ the importance of ensuring that good working relationships are established and maintained prior to, and on completion of, the handover procedure
 - ◆ for your organisation's image
 - ◆ to maintain goodwill amongst your clients, hirers, customers, own colleagues and other personnel
- K5 Reporting lines and procedures:
- ◆ your organisation's reporting lines and procedures associated with the handover of plant machinery and equipment

UNIT PM23 (DE78 04)

Hand Over Plant and Equipment to the Control of Others

Notes/Comments

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met.

Candidate: _____

Date: _____

Assessor: _____

Date: _____

Internal Verifier: _____

Date: _____

Section 4 — Blank recording forms

This section consists of the blank forms referred to in Section 2 for you to photocopy. You may find these useful when compiling your portfolio.

Portfolio title page

Your name: _____

Job title: _____

Name of Employer/
Training Provider/
College: _____

Their address: _____

Tel no: _____

SVQ: _____

level: _____

Units submitted for assessment:

Mentor: _____

(Please provide details
of Mentor's experience) _____

Assessor: _____

Date: _____

Personal profile

Name

Address

Postcode

Tel no

Home:

Work:

Job title

Relevant experience

Description of your current job

Previous work experience

Qualifications and training

Continued overleaf

**Qualifications and Training
(continued)**



Voluntary work/interests



**Name of Employer/Training
Provider/College**



Address



Postcode



Tel no



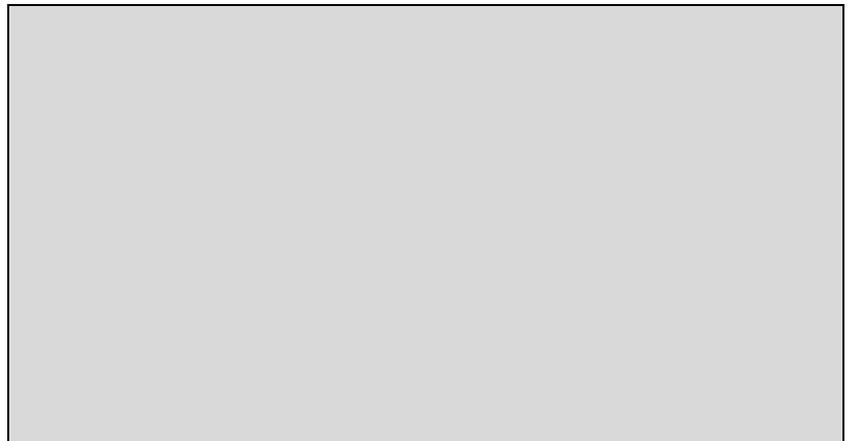
Type of Business



Number of Staff



**Structure of organisation
(include chart or diagram if
available)**



Contents checklist

You might also find it useful to complete the following checklist as you work your way through your portfolio. This will help you to see if you have included all the relevant items. Once you have completed your portfolio, you will be able to use this checklist again as a contents page, by inserting the relevant page or section numbers in the right hand column.

| | Completed? | Page/Section number |
|--|--------------------------|---------------------|
| Title page for the portfolio | <input type="checkbox"/> | |
| Personal profile | | |
| ◆ your own personal details | <input type="checkbox"/> | |
| ◆ a brief CV or career profile | <input type="checkbox"/> | |
| ◆ description of your job | <input type="checkbox"/> | |
| ◆ information about your employer/training provider/college | <input type="checkbox"/> | |
| Unit Assessment Plans | <input type="checkbox"/> | |
| Unit progress record | <input type="checkbox"/> | |
| Completed Element Achievement Records for each Unit | | |
| ◆ signed by yourself, your assessor and the internal verifier (where relevant) | <input type="checkbox"/> | |
| ◆ Evidence reference numbers included | <input type="checkbox"/> | |
| Index of evidence (with cross-referencing information completed) | <input type="checkbox"/> | |
| Evidence (with reference numbers) | | |
| ◆ observation records | <input type="checkbox"/> | |
| ◆ details of witnesses (witness testimony sheets) | <input type="checkbox"/> | |
| ◆ personal statements | <input type="checkbox"/> | |
| ◆ products of performance | <input type="checkbox"/> | |

Personal statement

| Date | Evidence index number | Details of statement | Links to other evidence (enter numbers) | Units, elements, pcs, and range covered |
|------|-----------------------|----------------------|---|---|
| | | | | |

Candidate signature: _____ Date: _____

Observation record

Unit/Element(s): _____

Candidate: _____ Date of observation: _____

Evidence index number: _____

| Skills/activities observed: | PCs and range covered: |
|-----------------------------|------------------------|
| | |

Knowledge and understanding apparent from this observation:

Other Units/elements to which this evidence may contribute:

Assessor comments and feedback to candidate:

I can confirm the candidate's performance was satisfactory.

Assessor's signature: _____ Date: _____

Candidate's signature: _____ Date: _____

Record of questions and candidate's answers

| | |
|--|--------------------|
| Unit: | Element(s): |
| Evidence index number: | |
| Circumstances of assessment: | |
| List of questions and candidate's responses: Q: A: Q: A: Q: A: Q: A: Q: A: | |
| Assessor's signature: | Date: |
| Candidate's signature | Date: |

UNIT:

Element

| |
|----------------|
| Notes/Comments |
|----------------|

The candidate has satisfied the Assessor and Internal Verifier that the performance evidence has been met

Candidate: _____

Date: _____

Assessor: _____

Date: _____

Internal Verifier: _____

Date: _____

Scottish Qualifications Authority

Portfolio:

We hope this portfolio was appropriate to your needs. We welcome feedback on our products and services. If you have any comments on this document, please use this form to let us know about them. Thank you.

Comments

Please return this form to:

Support Materials
Scottish Qualifications Authority
The Optima Building
58 Robertson Street
Glasgow G2 8DQ

Optional information:

Name:

Organisation: