CITY & GUILDS LEVEL 2 AWARD IN THE SAFE APPLICATION OF PESTICIDES USING VARIABLE GEOMETRY BOOM OR BROADCAST SPRAYERS (PA3) 601/5142/0

QUALIFICATION GUIDANCE

Independently Assessed

Essential Qualification Information

Not to be used by the Candidate during Assessment

You will require some of this information to accurately complete the Record of Assessment (ROA)

Qualification Group No	0216	Pesticides
Qualification Programme No	0216-51	L2 Award in the Safe Application of Pesticides Using Variable Geometry Boom or Broadcast Sprayers (PA3)
Unit(s)	121	Operating a Broadcast Sprayer with Air Assistance (PA3A) (T/505/7685)
	122	Operating a Variable Geometry Boom Sprayer with Air Assistance (PA3B) (F/505/7687)
	123	Operating a Variable Geometry Boom Sprayer without Air Assistance (PA3C) (L/505/7689)
Guided Learning Hours (GLH)		54
Total Qualification Time (TQT)		60
Recommended Assessment Duration		1.5 – 3 hours per Candidate
Pre-Requisite Units	101	Principles of Safe Handling and Application of Pesticides (PA1)

Version and date	Change detail	Section
1.1 November 2017	Added TQT details Deleted QCF / Learning Time	**Qualification at a glance, Structure** **Throughout**
1.2 April 2022	GLH & TQT clarified and highlighted City & Guilds address updated	**Qualification at a glance** **Pg 5**

City & Guilds Level 2 Award in the Safe Application of Pesticides Using Variable Geometry Boom or Broadcast Sprayers (PA3) Qualification Guidance

Introduction

The scheme will be administered by City & Guilds

City & Guilds will:

Publish - Scheme regulations
- Qualification guidance
- Training material
- Trainers support material

Approve Centres to co-ordinate and administer the scheme
Set standards for the training of Verifiers and Assessors
Recruit, train and deploy Verifiers
Manage verification
Issue Certificates to successful Candidates

The Qualification

The qualification will be awarded to Candidates who achieve the required level of competence in the units to which their Certificate relates.

Training

The Code of Practice for Using Plant Protection Products states " By Law everyone who uses pesticides professionally must have received adequate training in using pesticides safely". Candidates are strongly advised to ensure that they will be able to meet the standards required in the assessment.

Total Qualification Time

Total Qualification Time (TQT) is the total amount of time, in hours, expected to be spent by a Learner to achieve a qualification. It includes both guided learning hours (which are listed separately) and hours spent in preparation, study and assessment.

Access to Assessment

Assessment Centres will be responsible for arranging the assessment on behalf of the Candidate.

The minimum age limit for Candidates taking Certificates of Competence is 16 years. There is no upper age limit.

The assessment is divided in to **three** optional units:

Unit 121 (PA3A) (Mandatory) (Credit Value 3) (Print pages **6 – 12** plus **27**)

Outcome 1. Know the legislative and safety regulations relating to application equipment **(Criteria 1.1 – 1.2)**
Outcome 2. Be able to assess the environmental factors relating to mixing and application **(Criteria 2.1 – 2.2)**
Outcome 3. Be able to read and interpret product information **(Criteria 3.1 – 3.1)**
Outcome 4. Be able to prepare and calibrate the applicator **(Criteria 4.1 – 4.5)**
Outcome 5. Be able to operate the application equipment **(Criteria 5.1 – 5.4)**
Outcome 6. Know how to carry out post-operational procedures **(Criteria 6.1 – 6.3)**

Unit 122 (PA3B) (Mandatory/Optional) (Credit Value) (Print pages **13 – 19** plus **27**)

Outcome 1. Know the legislative and safety regulations relating to application equipment **(Criteria 1.1 – 1.2)**
Outcome 2. Be able to assess the environmental factors relating to mixing and application **(Criteria 2.1 – 2.2)**
Outcome 3. Be able to read and interpret product information **(Criteria 3.1 – 3.1)**
Outcome 4. Be able to prepare and calibrate the applicator **(Criteria 4.1 – 4.5)**
Outcome 5. Be able to operate the application equipment **(Criteria 5.1 – 5.4)**
Outcome 6. Know how to carry out post-operational procedures **(Criteria 6.1 – 6.3)**

Unit 123 (PA3C) (Mandatory/Optional) (Credit Value) (Print pages **20 – 27**)

Outcome 1. Know the legislative and safety regulations relating to application equipment **(Criteria 1.1 – 1.2)**
Outcome 2. Be able to assess the environmental factors relating to mixing and application **(Criteria 2.1 – 2.2)**
Outcome 3. Be able to read and interpret product information **(Criteria 3.1 – 3.1)**
Outcome 4. Be able to prepare and calibrate the applicator **(Criteria 4.1 – 4.5)**
Outcome 5. Be able to operate the application equipment **(Criteria 5.1 – 5.4)**
Outcome 6. Know how to carry out post-operational procedures **(Criteria 6.1 – 6.3)**

Candidates must successfully achieve **all** assessment activities in their chosen unit(s).

There are no endorsements for this Award.

Quality Assurance

Verification is a process of monitoring assessment; it is an essential check to confirm that the assessment procedures are being carried out in the way City & Guilds has specified. The overall aim of Verification is to establish a system of quality assurance that is acceptable in terms of both credibility and cost effectiveness.

Approved Assessors will be subject to a regular visit by a Verifier at a time when assessments are being undertaken.

Documents completed by the Assessor may be inspected by a Centre appointed Internal Verifier and a City & Guilds approved Verifier at any time.

Compliance with the verification requirements is a pre-requisite for Assessors remaining on the list of approved Assessors.

After assessment has been completed the Qualification Guidance is to be retained by the Assessor for 12 months and is to be made available for inspection by a Centre appointed Internal Verifier, a City & Guilds approved Verifier or when a centre visit takes place by a Quality Systems Consultant (QSC).

Performance Evaluation

The result of each assessment activity is evaluated against the following criteria:

M = Met Meets or exceeds the assessment criteria by displaying a level of practical performance and/or underpinning knowledge. If the Criterion has been MET, a tick ☑ is to be put in the box provided in the bottom right-hand column of each section.

NM = Not Met Does not satisfy the requirements of the assessment criteria, being unable to perform the practical task satisfactorily or safely or having insufficient underpinning knowledge. If the Criterion is NOT MET, a cross ☒ is to be put in the box provided in the bottom right-hand column of each section.

Appeals and Equal Opportunities

Centres must have their own auditable, appeals procedures. If a Candidate is not satisfied with the examination conditions or a Candidate feels the opportunity for examination is being denied, the Centre Manager should, in the first instance, address the problem. If, however the problem cannot be resolved, City & Guilds will arbitrate and a Principal Verifier may be approached to offer independent advice. All appeals must be clearly documented by the Centre Manager and made available to the Principal Verifier or City & Guilds if advice is required.

Should occasions arise when Centres are not satisfied with any aspect of the verification process, they should contact the Quality Assurance Manager at City & Guilds NPTC, Building 500, Abbey Park, Stareton, Warwickshire, CV8 2LY. Telephone 024 7685 7300

Access to the qualification is open to all, irrespective of gender, race, creed or special needs. Subject to H&S restrictions the Centre Manager should ensure that no learner is subjected to unfair discrimination on any grounds in relation to access to assessment and to the fairness of the assessment. QCA requires City & Guilds to monitor centres to check whether equal opportunities policies are being adhered to.

Validation of Equipment

All equipment being used for this assessment must comply with the relevant requirements of the Provision and Use of Work Equipment Regulations (PUWER) 1998.

Vehicles must comply with Department of Transport and Road Traffic Acts where relevant.

Any machinery/equipment complying with current legal requirements is acceptable for the assessment, provided it is suitably equipped for **all** assessment activities to be carried out.

Summary of responsibilities in the assessment process		
Centre responsibilities	**Candidate responsibilities**	**Assessor responsibilities**
A suitable site is made available for the assessment to take place		**Ensuring that the site provided is suitable for the assessment to take place**
Machinery, equipment and materials are available to enable assessment of all the activities to take place	**To be familiar with the machinery/equipment being used for the assessment**	**Ensuring that the machinery, equipment and materials provided satisfy the assessment requirements**
	To bring appropriate Personal Protective Equipment (PPE) to the assessment	**Ensuring that candidate's PPE complies with the requirements of the assessment**
	To bring relevant training materials (including calibration sheet if applicable)	
	To bring a product label appropriate for the assessment	**To ensure that the product label is appropriate for the assessment (or provide a suitable alternative)**

Safe Practice

The Assessor and Candidate must wear Personal Protective Equipment (PPE) when appropriate.

The Assessor must ensure that a Site Specific Risk Assessment is carried out.

All equipment must be operated in such a way that the Candidate, Assessor, other persons and the environment are not endangered. Failure to operate safely and comply with these requirements will result in the Candidate not meeting the required standard.

A breach of Health and Safety that puts any person at risk during the assessment process will result in the assessment being terminated and the Candidate not meeting the required standard. The Assessor may stop the assessment on the grounds of safety at any time at their discretion.

Before any assessments take place, Assessor & Candidate should to be aware of any local or national issues to prevent breach of security, safety and any cross contamination or damage to the local environment.

Information

During the assessment the candidate may refer to operator manuals, training materials or safety publications, but they **may not** refer to the Qualification Guidance Document.

Questions should be related to the background or employment aspirations of the candidate.

Candidates who undertake this assessment and have met the requirements are reminded of their legal obligation to receive/undertake appropriate additional training in the use of any equipment that differs from that used during the assessment, but which they are nevertheless qualified to use.

Assessment Guidance for the Assessor

This qualification can only be assessed by an Assessor who is suitably qualified and meets the requirements of the awarding body. The Assessor must be independent **and cannot have been involved with the training of the Candidate**. Please see City & Guilds Centre Manual for guidance.

The Candidate is to be notified of the place and time of assessment and when formal assessment commences and ceases.

Assessors are reminded that assessment is a formal process and that assessment must be carried out using this Qualification Guidance. All relevant assessment criteria must be assessed as specified in the Qualification Guidance. Assessment will be carried out by direct observation and by oral questioning of the Candidate. **Where a specific number of responses are required these may include other suitable answers not specified if they are deemed to be correct by the Assessor**. The performance of the Candidate is to be recorded on the Qualification Guidance as directed by completing the tick boxes. Space has been provided on the Qualification Guidance for the person assessing to record relevant information which can be utilised to provide feedback to the Candidate. After assessment has been completed the Qualification Guidance document is to be retained by the assessor and provided if required.

Assessment Guidance for the Candidate

A list of registered Assessment Centres is available from City & Guilds NPTC. (www.nptc.org.uk)

Assessment is a process by which it is confirmed that the candidate is competent in the unit(s) within the award to which the assessment relates. It is the process of collecting evidence about the candidate's capabilities and judging whether that evidence is sufficient to attribute competence.

The Candidate must be registered through the City & Guilds approved Assessment Centre for this qualification prior to the assessment.

The results of the assessment will be recorded on the Record of Assessment form (ROA).

The Qualification Guidance contains criteria relating to:

- Observation of practical performance
- Assessment of underpinning knowledge

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Unit 121 – Operating a Broadcast Sprayer with Air Assistance (PA3A)

Candidate A	**Name:**	**Date:**	**Start Time:**	**Duration:**
Candidate B	**Name:**	**Date:**	**Start Time:**	**Duration:**
Candidate C	**Name:**	**Date:**	**Start Time:**	**Duration:**
Candidate D	**Name:**	**Date:**	**Start Time:**	**Duration:**

CRITERIA NUMBER	ASSESSMENT CRITERIA	ASSESSOR GUIDANCE	ASSESSMENT ACTIVITIES	CANDIDATE A	B	C	D
Unit 121 **1.1**	Describe the legal requirements relating to applying pesticides using air assisted broadcast sprayers	Candidate to **describe two** operator's obligations in terms of legal requirements	May include: • all required guards are in place and equipment complies with legal requirements • comply with all relevant road traffic regulations when operating or transporting on the public highway • comply with The Plant Protection Products (Sustainable Use) Regulations 2012 • the operator must hold the appropriate certification for the equipment they are using **Met✓ Not Met X**	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐
Unit 121 **1.2**	Describe how to apply pesticides safely using air assisted broadcast sprayers following industry best practice	Candidate to **describe one** operator safety regulation in terms of air assisted broadcast sprayers	May include: • comply with Pesticide Codes of Practice • adopt industry best practice • be aware of any safety implications imposed by Risk/COSHH Assessment and comply with the requirements	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐
		Candidate to **describe two** precautions the operator may take to protect self from pesticide contamination when operating the prime mover	Sealed cab: • fit carbon filter • use of in-cab controls • ensure ventilation system is functional • close all windows • contaminated PPE stored in external locker • awareness of the siting of pressurised components within confines of cab Open cab/canopy/platform: • use of appropriate PPE • awareness of the siting of pressurised components within confines of cab/canopy/platform	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
		When preparing the prime mover and sprayer, the candidate is to **describe three** checks which the operator may carry out to protect self from physical danger during operation	May include: • compatibility of prime mover and sprayer • front weights • wheel track width • correct tyre pressures • condition of tyres • brake function	☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐
		Candidate to **state four** aspects of safe practice to be considered when driving on uneven/sloping terrain	May include: • assess conditions • select four wheel drive • appropriate speed • correct gear selection • effect of changing load on stability • use of weights to stabilise prime mover • correct turning procedure • keep centre of gravity as low as possible	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
		Candidate to **state one** consideration for safe driving on a public highway	May include: • independent brakes coupled together • travelling at high speed makes vehicle unstable **Met ✓ Not Met X**	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐

CRITERIA NUMBER	ASSESSMENT CRITERIA	ASSESSOR GUIDANCE	ASSESSMENT ACTIVITIES	CANDIDATE A	CANDIDATE B	CANDIDATE C	CANDIDATE D
Unit 121 **2.1**	Identify risks to the environment	Candidate to **identify all relevant** risks to the environment for the application site	May include:				
			• ground conditions	☐	☐	☐	☐
			• water courses	☐	☐	☐	☐
			• environmental margins/strips/areas	☐	☐	☐	☐
			• drains	☐	☐	☐	☐
			• boreholes	☐	☐	☐	☐
			• wildlife	☐	☐	☐	☐
			• non-target plants	☐	☐	☐	☐
			• sensitive crops/areas	☐	☐	☐	☐
			• hedgerows	☐	☐	☐	☐
			• housing	☐	☐	☐	☐
			• public access	☐	☐	☐	☐
			• other risks particular to the site	☐	☐	☐	☐
			Met ✓ Not Met X	☐	☐	☐	☐
Unit 121 **2.2**	Explain how to minimise risks to the environment	Candidate to explain how to minimise the risks identified in **2.1**	• use an appropriate pesticide (minimal environmental impact)	☐	☐	☐	☐
			• careful timing of application	☐	☐	☐	☐
			• check and maintain application rate	☐	☐	☐	☐
			• avoid off target application	☐	☐	☐	☐
			• observe buffer zones	☐	☐	☐	☐
			• comply with air assisted LERAP requirements	☐	☐	☐	☐
			• erect warning signs	☐	☐	☐	☐
			• notify neighbours	☐	☐	☐	☐
		Candidate to **state** the reason for minimising off target application & spray drift	• avoidance of contamination to people and the environment	☐	☐	☐	☐
		Candidate to check & comment on wind speed & direction	• use of anemometer or visual signs at suitable height	☐	☐	☐	☐
			• wind direction	☐	☐	☐	☐
		Candidate to state **five** factors that affect spray drift	May include:				
			• weather conditions	☐	☐	☐	☐
			• direction of spraying	☐	☐	☐	☐
			• presence of natural/living windbreaks	☐	☐	☐	☐
			• nozzle type and size	☐	☐	☐	☐
			• pressure	☐	☐	☐	☐
			• fan speed	☐	☐	☐	☐
			• fan pitch	☐	☐	☐	☐
			• forward speed	☐	☐	☐	☐
			• nozzle configuration	☐	☐	☐	☐
			• target canopy density	☐	☐	☐	☐
			• use of air deflector(s)	☐	☐	☐	☐
			Met ✓ Not Met X	☐	☐	☐	☐
Unit 121 **3.1** **Unit 121** **3.2**	Read product information Interpret product information	The candidate is required to **read** and **interpret** the information on a product label and provide relevant information as requested by the Assessor **Note to the Assessor**: A product label is required. It is expected that the candidate will provide the product label. The label provided must be for a currently approved product and appropriate to the candidates normal work situation **Note to the Candidate (Assessor also to note)**: It is acceptable for key information on the label to be highlighted for use during the assessment	May include the following:				
			• product name	☐	☐	☐	☐
			• active substance(s) (ingredient(s))	☐	☐	☐	☐
			Important information:				
			• field of use	☐	☐	☐	☐
			• crop/target	☐	☐	☐	☐
			• maximum individual dose	☐	☐	☐	☐
			• maximum total dose	☐	☐	☐	☐
			• maximum number of treatments	☐	☐	☐	☐
			• specific product precautions/warnings	☐	☐	☐	☐
			• operator protection	☐	☐	☐	☐
			• environmental protection	☐	☐	☐	☐
			• restrictions on use	☐	☐	☐	☐
			Crop specific information:				
			• crop/target	☐	☐	☐	☐
			• dose rate	☐	☐	☐	☐
			• water volume	☐	☐	☐	☐
Continued			• timing	☐	☐	☐	☐

CRITERIA NUMBER	ASSESSMENT CRITERIA	ASSESSOR GUIDANCE	ASSESSMENT ACTIVITIES	CANDIDATE			
				A	B	C	D
Cont…			Mixing and spraying:				
Unit 121			• filling	☐	☐	☐	☐
3.1			• recommended nozzles	☐	☐	☐	☐
				☐	☐	☐	☐
Unit 121			• spray quality	☐	☐	☐	☐
3.2			• additional label information	☐	☐	☐	☐
			• compatibility	☐	☐	☐	☐
			Met ✓ Not Met X	☐	☐	☐	☐
Unit 121 **4.1**	Identify applicator controls and components	Candidate to identify **all** components and controls relating to the applicator being used for the assessment	May include all/any of the following:				
			• main spray tank	☐	☐	☐	☐
			• clean water tank	☐	☐	☐	☐
			• hand wash tank	☐	☐	☐	☐
			• pump	☐	☐	☐	☐
			• pulsation damper	☐	☐	☐	☐
			• filling control and devices	☐	☐	☐	☐
			• agitation control	☐	☐	☐	☐
			• pressure adjustment control	☐	☐	☐	☐
			• pressure gauge	☐	☐	☐	☐
			• on/off	☐	☐	☐	☐
			• boom isolators	☐	☐	☐	☐
			• boom section pressure compensation controls	☐	☐	☐	☐
			• filters	☐	☐	☐	☐
			• nozzles	☐	☐	☐	☐
			• diaphragm check valves	☐	☐	☐	☐
			• tank wash system	☐	☐	☐	☐
			• tank drain	☐	☐	☐	☐
			• fan blades and adjustment (if applicable)	☐	☐	☐	☐
			• fan speed control	☐	☐	☐	☐
			• air deflector(s)	☐	☐	☐	☐
			• trash guard	☐	☐	☐	☐
			• other components/controls specific to the applicator	☐	☐	☐	☐
		Identify and explain the use of **one** type of nozzle, which could be that intended for use	May include:				
			• hollow cone – good coverage	☐	☐	☐	☐
			• hollow cone air inclusion – drift reduction properties	☐	☐	☐	☐
			Met ✓ Not Met X	☐	☐	☐	☐
Unit 121 **4.2**	Carry out pre use checks to the prime mover	Candidate to **carry out all** pre-use checks **relevant** to the prime mover being used for the assessment	May include:				
			• guards in place and in good condition	☐	☐	☐	☐
			• visual inspection of the wheels and tyres	☐	☐	☐	☐
			• tyre pressures	☐	☐	☐	☐
			• fuel level adequate	☐	☐	☐	☐
			• engine oil level is within acceptable limits	☐	☐	☐	☐
			• hydraulic oil level is within acceptable limits (if accessible)	☐	☐	☐	☐
			• transmission oil level is within acceptable limits (if accessible)	☐	☐	☐	☐
			• coolant level is adequate	☐	☐	☐	☐
			• engine air filter is clean	☐	☐	☐	☐
			Met ✓ Not Met X	☐	☐	☐	☐
Unit 121 **4.3**	Carry out pre-use and operational checks to the sprayer	Candidate to **carry out all** pre-use and operational checks to the sprayer/applicator	May include all/some of the following as applicable to the sprayer/applicator:				
		Check security of attachment of applicator mechanisms	• fasteners tight	☐	☐	☐	☐
			• straps inspected and adjusted if necessary	☐	☐	☐	☐
			• linkage secure	☐	☐	☐	☐
			• sideways movement restricted	☐	☐	☐	☐
			• drawbar pin secured	☐	☐	☐	☐
Continued		**Check** for mechanical defects	• seized, worn or damaged controls/components	☐	☐	☐	☐
			• electrical connector	☐	☐	☐	☐

CRITERIA NUMBER	ASSESSMENT CRITERIA	ASSESSOR GUIDANCE	ASSESSMENT ACTIVITIES	CANDIDATE A	B	C	D
Cont… **Unit 121** **4.3**		**Check** that the applicator is lubricated correctly	• identification of lubrication points • visual inspection of lubrication points • visual inspection of levels	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐			
		Remove, clean and refit a filter	Candidate to: • remove and clean using appropriate method • contain spillage • check for defects, replace if damaged • refit	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐			
		Remove, clean/replace and refit a nozzle/restrictor	Candidate to: • remove and clean using appropriate method • contain spillage • check for defects replace if worn/damaged • refit	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐			
		Explain how to use the control panel to ensure that the applicator is functioning correctly **(if applicable)**	May include: • functions of control panel • recognition of malfunctions before and during operation • check accuracy of base settings • switch to manual/test mode where applicable	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐			
		Part fill applicator	To include: • suitable site selected • fill by usual on-site method, following approved procedures • clean water supply	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐			
		Check applicator for air and liquid leaks and correct spray patterns	May include: • use higher than normal operating pressure • visual check of all nozzles/atomisers for correct spray patterns, absence of blockages, streaking, pulsing • correct alignment • replace defective nozzles/atomisers/discs • lids and seals • liquid pipe work and connections • air pipework • control valves • filters • pressure gauge • diaphragm check valves	☐ ☐			
		State one suitable action in the event of the control panel failing (if applicable)	May include: • stop pesticide application • manual operation of controls if possible	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐			
			Met ✓ Not Met X	☐	☐	☐	☐
Unit 121 **4.4**	Calibrate the sprayer and record relevant data	Candidate is required to **calibrate** the applicator and record **relevant** data	Calibration may include the following:				
		Select and record forward speed	• suitable forward speed for crop/target and ground conditions • appropriate gear selected and engine speed established • accurate measurement of distance • accurate measurement of time taken to cover distance • correct use of formula to establish forward speed	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐			
		Calculate required output/volume rate	• correct use of formula	☐ ☐ ☐ ☐			
Continued		**Select** appropriate nozzle using manufacturers literature (if available)	• use of manufacturers operators handbook • use of nozzle manufacturers literature • confirm requirements of product label	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐			

CRITERIA NUMBER	ASSESSMENT CRITERIA	ASSESSOR GUIDANCE	ASSESSMENT ACTIVITIES	CANDIDATE A	B	C	D
Cont… **Unit 121** **4.4**		**Set operating pressure**	• pressure as determined by nozzle chart • pressurise/purge appropriate to the system	☐ ☐	☐ ☐	☐ ☐	☐ ☐
		Check sprayer output	• check output • compare with target output • vary pressure to make small adjustments • change nozzles if required • or any other acceptable method	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐
		State four pieces of calibration data that should be recorded	May include: • registration number of vehicle • tyre size and pressure • gear selected • engine speed • fan speed • vehicle forward speed • application volume • nozzles fitted • nozzle positions • pressure • flow rate	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
			Met ✓ Not Met X	☐	☐	☐	☐
Unit 121 **4.5**	Calculate quantities of pesticide and water required	Candidate to calculate quantities required for both a specified area and full tank	To include: • amount of water required for specified area • amount of pesticide required for specified area • amount of pesticide required for full tank	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐
			Met ✓ Not Met X	☐	☐	☐	☐
Unit 121 **5.1**	Measure the required quantities and add to the sprayer	Candidate to **measure** and **add** quantities required for the area specified in **4.5** **Note: This may be a simulated pesticide product provided by the Assessor**	To include: • correct selection and use of PPE/RPE (as required by the product label and/or COSHH Assessment) • observance of pesticide manufacturers instructions for mixing sequence and agitation (or other recommended method) • suitable site selected • clean water supply • accurate measurement of water • accurate measurement of pesticide • use of filling device (if fitted) • avoidance of spillage	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
			Met ✓ Not Met X	☐	☐	☐	☐
Unit 121 **5.2**	Demonstrate safe and accurate application procedures	Candidate to describe **two** possible methods of marking out the site to achieve accurate spraying	May include: • crop rows • marker poles • GPS	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐
		Candidate to **state two** effects of increasing the fan speed	May include: • a larger volume of air is produced, which can deliver the pesticide into a larger target with a higher crop density • increased risk of damage to delicate fruits or berries • a larger volume of air could create excessive spray drift	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐
		Candidate to **explain one** reason for adjusting fan pitch	May include: • a larger volume of air can be produced at lower engine speeds to save fuel and machine wear • a suitable volume of air can be achieved to deliver the pesticide to the target site	☐ ☐	☐ ☐	☐ ☐	☐ ☐
Continued		Candidate to **explain one** reason why different nozzle sizes may be used along the boom or nozzles may be shut off	May include: • crop density may vary at different heights • crop heights may vary	☐ ☐	☐ ☐	☐ ☐	☐ ☐

CRITERIA NUMBER	ASSESSMENT CRITERIA	ASSESSOR GUIDANCE	ASSESSMENT ACTIVITIES	CANDIDATE A	B	C	D
Cont… Unit 121 5.2		Candidate to explain the procedure if the tank needs refilling part way through application Area treated must be typical of the candidates normal work situation and be sufficient to demonstrate safe and accurate application	May include: • mark the point where the tank emptied • measure and mix required quantities • continue application at the marked point To include: • treatment area clearly identified • operate controls to start and finish application at the beginning and end of each row/bed • forward speed maintained/correct forward speed for site conditions • pressure maintained • accurate matching of bouts • obstacles dealt with correctly (if applicable) • area treated maintaining adequate penetration and coverage • area treated minimising overlaps and misses • awareness of changing crop density and appropriate action taken(if applicable) • awareness of changing weather conditions and appropriate action taken (if applicable) **Met ✓ Not Met X**	☐	☐	☐	☐
Unit 121 5.3	Carry out all activities protecting human health and the environment	**Note to the Assessor:** Assessor to be **satisfied** that the candidate has carried out **all activities** protecting human health and the environment	To include: • prevention of personal injury and contamination through correct selection and use of PPE/RPE (as required by the product information and/or COSHH/Risk Assessment) • prevention of public / bystander contamination • safe filling procedure • avoidance of excessive spray drift • avoidance of off-target application/contamination • avoidance of over dosing/under dosing crop/target **Met ✓ Not Met X**	☐	☐	☐	☐
Unit 121 5.4	Complete a treatment record	The candidate is required to **complete** a treatment record Note to the assessor: the treatment record must be approved or if necessary supplied by the assessor	Completion of the treatment record must be: • accurate • legible (if handwritten) **Met ✓ Not Met X**	☐	☐	☐	☐
Unit 121 6.1	Explain how to manage surplus pesticide and dispose of waste material	Candidate to **explain one** method of managing surplus concentrate pesticide Candidate to **explain two** method of dealing with waste packaging Candidate to **explain two** methods of managing surplus dilute pesticides	Explanation may include: • return to temporary mobile store • return to fixed store Containers: • triple rinsed • placed in secure storage until disposal • returned to supplier • collected by a licensed waste disposal contractor Packaging: • thoroughly emptied • placed in secure storage until disposal • collected by a licensed waste disposal contractor Explanation may include: • back on to site as long as it is below the maximum dose rate • use on another approved crop/target • treated by specialist treatment facility on site (e.g. a lined bio bed) • collected by a licensed waste disposal contractor **Met ✓ Not Met X**	☐	☐	☐	☐

CRITERIA NUMBER	ASSESSMENT CRITERIA	ASSESSOR GUIDANCE	ASSESSMENT ACTIVITIES	CANDIDATE A	B	C	D
Unit 121 **6.2**	Explain how to clean and decontaminate the sprayer and, if applicable, the prime mover	Candidate to **explain four** factors that need to be considered when cleaning and decontaminating the sprayer and, if applicable, the prime mover	May include: • select and use appropriate PPE • appropriate site • thorough washing with water and suitable additive if required • internal and external surfaces • use of in-built wash systems if provided • care to ensure contamination 'hot-spots' are clean • thorough flushing of systems • safe disposal of contaminated washings • when cleaning should take place • safe procedures followed **Met ✓ Not Met X**	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Unit 121 **6.3**	Describe the storage requirements for the sprayer	Candidate to **describe three** factors to consider prior to storing the applicator	May include: • ensure the applicator is clean and dry • inspect for wear and damage • replace any worn or damaged parts • ensure system is drained and any valves left in appropriate positions • frost protection/prevention implemented • lubricate as required • store undercover and out of direct sunlight • store in a secure area **Met ✓ Not Met X**	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Unit 122 – Operating a Variable Geometry Boom Sprayer with Air Assistance (PA3B)

Candidate A	**Name:**	**Date:**	**Start Time:**	**Duration:**
Candidate B	**Name:**	**Date:**	**Start Time:**	**Duration:**
Candidate C	**Name:**	**Date:**	**Start Time:**	**Duration:**
Candidate D	**Name:**	**Date:**	**Start Time:**	**Duration:**

CRITERIA NUMBER	ASSESSMENT CRITERIA	ASSESSOR GUIDANCE	ASSESSMENT ACTIVITIES	CANDIDATE A	B	C	D
Unit 122 **1.1**	Describe the legal requirements relating to applying pesticides using air assisted variable geometry boom sprayers	Candidate to **describe two** operator's obligations in terms of legal requirements	May include: • all required guards are in place and equipment complies with legal requirements • comply with all relevant road traffic regulations when operating or transporting on the public highway • comply with The Plant Protection Products (Sustainable Use) Regulations 2012 • the operator must hold the appropriate certification for the equipment they are using **Met✓ Not Met X**	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐
Unit 122 **1.2**	Describe how to apply pesticides safely using air assisted variable geometry boom sprayers following industry best practice	Candidate to **describe one** operator safety regulation in terms of using air assisted variable geometry boom sprayers	May include: • comply with Pesticide Codes of Practice • adopt industry best practice • be aware of any safety implications imposed by Risk/COSHH Assessment and comply with the requirements	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐
		Candidate to **describe two** precautions the operator may take to protect self from pesticide contamination when operating the prime mover	sealed cab: • fit carbon filter • use of in-cab controls • ensure ventilation system is functional • close all windows • contaminated PPE stored in external locker • awareness of the siting of pressurised components within confines of cab open cab/canopy/platform: • use of appropriate PPE • awareness of the siting of pressurised components within confines of cab/canopy/platform	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
		When preparing the prime mover and sprayer, the candidate is to **describe three** checks which the operator may carry out to protect self from physical danger during operation	May include: • compatibility of prime mover and sprayer • front weights • wheel track width • correct tyre pressures • condition of tyres • brake function	☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐
		Candidate to **state four** aspects of safe practice to be considered when driving on uneven/sloping terrain	May include: • assess conditions • select four wheel drive • appropriate speed • correct gear selection • effect of changing load on stability • use of weights to stabilise prime mover • correct turning procedure • keep centre of gravity as low as possible	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
		Candidate to **state one** consideration for safe driving on a public highway	May include: • independent brakes coupled together • travelling at high speed makes vehicle unstable **Met ✓ Not Met X**	☐ ☐	☐ ☐	☐ ☐	☐ ☐

CRITERIA NUMBER	ASSESSMENT CRITERIA	ASSESSOR GUIDANCE	ASSESSMENT ACTIVITIES	CANDIDATE A	B	C	D
Unit 122 **2.1**	Identify risks to the environment	Candidate to **identify all relevant** risks to the environment for the application site	May include:				
			• ground conditions	☐	☐	☐	☐
			• water courses	☐	☐	☐	☐
			• environmental margins/strips/areas	☐	☐	☐	☐
			• drains	☐	☐	☐	☐
			• boreholes	☐	☐	☐	☐
			• wildlife	☐	☐	☐	☐
			• non-target plants	☐	☐	☐	☐
			• sensitive crops/areas	☐	☐	☐	☐
			• hedgerows	☐	☐	☐	☐
			• housing	☐	☐	☐	☐
			• public access	☐	☐	☐	☐
			• other risks particular to the site	☐	☐	☐	☐
			Met ✓ Not Met X	☐	☐	☐	☐
Unit 122 **2.2**	Explain how to minimise risks to the environment	Candidate to **explain** how to minimise the risks identified in **2.1**	May include:				
			• use an appropriate pesticide (minimal environmental impact)	☐	☐	☐	☐
			• careful timing of application	☐	☐	☐	☐
			• check and maintain application rate	☐	☐	☐	☐
			• avoid off target application	☐	☐	☐	☐
			• observe buffer zones	☐	☐	☐	☐
			• comply with air assisted LERAP requirements	☐	☐	☐	☐
			• erect warning signs	☐	☐	☐	☐
			• notify neighbours	☐	☐	☐	☐
		Candidate to **state** the reason for minimising off target application and spray drift	• avoidance of contamination to people and the environment	☐	☐	☐	☐
		Candidate to **check and comment** on wind speed and direction	• use of anemometer or visual signs at suitable height	☐	☐	☐	☐
			• wind direction	☐	☐	☐	☐
		Candidate to **state five** factors that affect spray drift	May include:				
			• weather conditions	☐	☐	☐	☐
			• direction of spraying	☐	☐	☐	☐
			• presence of natural/living windbreaks	☐	☐	☐	☐
			• nozzle type and size	☐	☐	☐	☐
			• pressure	☐	☐	☐	☐
			• fan speed	☐	☐	☐	☐
			• fan pitch	☐	☐	☐	☐
			• air flow direction	☐	☐	☐	☐
			• forward speed	☐	☐	☐	☐
			• nozzle configuration	☐	☐	☐	☐
			• boom geometry	☐	☐	☐	☐
			• target canopy density	☐	☐	☐	☐
			• use of air deflector(s)	☐	☐	☐	☐
			Met ✓ Not Met X	☐	☐	☐	☐

CRITERIA NUMBER	ASSESSMENT CRITERIA	ASSESSOR GUIDANCE	ASSESSMENT ACTIVITIES	CANDIDATE A	B	C	D
Unit 122 **3.1** **Unit 122** **3.2**	Read product information Interpret product information	The candidate is required to **read** and **interpret** the information on a product label and provide **relevant** information as requested by the Assessor **Note to the Assessor**: A product label is required. It is expected that the candidate will provide the product label. The label provided must be for a currently approved product and appropriate to the candidates normal work situation **Note to the Candidate (Assessor also to note)**: It is acceptable for key information on the label to be highlighted for use during the assessment	May include the following: • product name ☐ ☐ ☐ ☐ • active substance(s) (ingredient(s)) ☐ ☐ ☐ ☐ Important information: • field of use ☐ ☐ ☐ ☐ • crop/target ☐ ☐ ☐ ☐ • maximum individual dose ☐ ☐ ☐ ☐ • maximum total dose ☐ ☐ ☐ ☐ • maximum number of treatments ☐ ☐ ☐ ☐ • specific product precautions/warnings ☐ ☐ ☐ ☐ • operator protection ☐ ☐ ☐ ☐ • environmental protection ☐ ☐ ☐ ☐ • restrictions on use ☐ ☐ ☐ ☐ Crop specific information: • crop/target ☐ ☐ ☐ ☐ • dose rate ☐ ☐ ☐ ☐ • water volume ☐ ☐ ☐ ☐ • timing ☐ ☐ ☐ ☐ Mixing and spraying: • filling ☐ ☐ ☐ ☐ • recommended nozzles ☐ ☐ ☐ ☐ • recommended pressure ☐ ☐ ☐ ☐ • spray quality ☐ ☐ ☐ ☐ • additional label information ☐ ☐ ☐ ☐ • compatibility ☐ ☐ ☐ ☐ **Met ✓ Not Met X** ☐ ☐ ☐ ☐				
Unit 122 **4.1**	Identify applicator controls and components	Candidate to **identify all** components and controls relating to the applicator being used for the assessment **Identify and explain** the use of **one** type of nozzle, which could be that intended for use	May include: • main spray tank ☐ ☐ ☐ ☐ • clean water tank ☐ ☐ ☐ ☐ • hand wash tank ☐ ☐ ☐ ☐ • pump ☐ ☐ ☐ ☐ • compressor ☐ ☐ ☐ ☐ • pulsation damper ☐ ☐ ☐ ☐ • filling control and devices ☐ ☐ ☐ ☐ • agitation control ☐ ☐ ☐ ☐ • pressure adjustment control ☐ ☐ ☐ ☐ • pressure gauge ☐ ☐ ☐ ☐ • on/off ☐ ☐ ☐ ☐ • boom break-backs ☐ ☐ ☐ ☐ • boom isolators ☐ ☐ ☐ ☐ • boom section pressure compensation controls ☐ ☐ ☐ ☐ • filters ☐ ☐ ☐ ☐ • nozzles ☐ ☐ ☐ ☐ • diaphragm check valves ☐ ☐ ☐ ☐ • tank wash system ☐ ☐ ☐ ☐ • tank drain ☐ ☐ ☐ ☐ • fan blades and adjustment (if applicable) ☐ ☐ ☐ ☐ • fan speed control ☐ ☐ ☐ ☐ • air deflector(s) ☐ ☐ ☐ ☐ • trash guard ☐ ☐ ☐ ☐ • other components/controls specific to the applicator ☐ ☐ ☐ ☐ May include: • hollow cone – good coverage ☐ ☐ ☐ ☐ • hollow cone air inclusion – drift reduction properties ☐ ☐ ☐ ☐ • flat fan – general purpose ☐ ☐ ☐ ☐ **Met ✓ Not Met X** ☐ ☐ ☐ ☐				

CRITERIA NUMBER	ASSESSMENT CRITERIA	ASSESSOR GUIDANCE	ASSESSMENT ACTIVITIES	CANDIDATE A	B	C	D
Unit 122 **4.2**	Carry out pre use checks to the prime mover	Candidate to **carry out all** pre-use checks relevant to the prime mover being used for the assessment	May include: • guards in place and in good condition • visual inspection of the wheels and tyres • tyre pressures • fuel level adequate • engine oil level is within acceptable limits • hydraulic oil level is within acceptable limits (if accessible) • transmission oil level is within acceptable limits (if accessible) • coolant level is adequate • engine air filter is clean **Met ✓ Not Met X**	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Unit 122 **4.3**	Carry out pre-use and operational checks to the sprayer	Candidate to **carry out all** pre-use and operational checks to the sprayer/applicator	May include all/some of the following as applicable to the sprayer/applicator:				
		Check security of attachment of applicator mechanisms	• safe unfolding of booms to avoid personal contamination and contact with Over Head Power Lines (OHPL) and any other overhead hazards • fasteners tight • straps inspected and adjusted if necessary • linkage secure • sideways movement restricted • drawbar pin secured	☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐
		Check for mechanical defects	• seized, worn or damaged controls/components • electrical connectors	☐ ☐	☐ ☐	☐ ☐	☐ ☐
		Check that the applicator is lubricated correctly	• identification of lubrication points • visual inspection of lubrication points • visual inspection of levels	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐
		Check boom settings, suspension and break-back devices	• boom suspension operational • break-back efficiency • height adjustment	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐
		Remove, clean and refit a filter	Candidate to: • remove and clean using appropriate method • contain spillage • check for defects, replace if damaged • refit	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐
		Remove, clean/replace and refit a nozzle/restrictor	Candidate to: • remove and clean using appropriate method • contain spillage • check for defects replace if worn/damaged • refit	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐
		Explain how to use the control panel to ensure that the applicator is functioning correctly **(if applicable)**	May include: • functions of control panel • recognition of malfunctions before and during operation • check accuracy of base settings • switch to manual/test mode where applicable	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐
		Part fill applicator	To include: • suitable site selected • fill by usual on-site method, following approved procedures • clean water supply	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐
Continued							

CRITERIA NUMBER	ASSESSMENT CRITERIA	ASSESSOR GUIDANCE	ASSESSMENT ACTIVITIES	CANDIDATE A	B	C	D
Cont… **Unit 122** **4.3**		**Check** applicator for air and liquid leaks and correct spray patterns	May include: • use higher than normal operating pressure • visual check of all nozzles/atomisers for correct spray patterns, absence of blockages, streaking, pulsing • correct alignment • replace defective nozzles/atomisers/discs • lids and seals • liquid pipe work and connections • air pipework • air ducting checked for leaks • control valves • filters • pressure gauge • diaphragm check valves	☐ ☐			
		State one suitable action in the event of the control panel failing	May include: • stop pesticide application • manual operation of controls if possible	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐			
			Met ✓ Not Met X	☐	☐	☐	☐
Unit 122 **4.4**	Calibrate the sprayer and record relevant data	Candidate is required to **calibrate** the applicator and record **relevant** data	Calibration may include the following:				
		Select and record forward speed	• suitable forward speed for crop/target and ground conditions • appropriate gear selected and engine speed established • accurate measurement of distance • accurate measurement of time taken to cover distance • correct use of formula to establish forward speed	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐			
		Calculate required output/volume rate	• correct use of formula	☐ ☐ ☐ ☐			
		Select appropriate nozzle using manufacturers literature (if available)	• use of manufacturers operators handbook • use of nozzle manufacturers literature • confirm requirements of product label	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐			
		Set operating pressure	• pressure as determined by nozzle chart • pressurise/purge appropriate to the system	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐			
		Check sprayer output	• check output • compare with target output • vary pressure to make small adjustments • change nozzles if required • or any other acceptable method	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐			
		State four pieces of calibration data that should be recorded	May include: • registration number of vehicle • tyre size and pressure • gear selected • engine speed • fan speed • vehicle forward speed • application volume • nozzles fitted • nozzle positions • pressure • flow rate	☐ ☐			
			Met ✓ Not Met X	☐	☐	☐	☐
Unit 122 **4.5**	Calculate quantities of pesticide and water required	Candidate to **calculate** quantities required for both a specified area and full tank	To include: • amount of water required for specified area • amount of pesticide required for specified area • amount of pesticide required for full tank	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐			
			Met ✓ Not Met X	☐	☐	☐	☐

CRITERIA NUMBER	ASSESSMENT CRITERIA	ASSESSOR GUIDANCE	ASSESSMENT ACTIVITIES	CANDIDATE A	B	C	D
Unit 122 **5.1**	Measure the required quantities and add to the sprayer	Candidate to **measure** and **add** quantities required for the area specified in **4.5** **Note: This may be a simulated pesticide product provided by the Assessor**	To include: • correct selection and use of PPE/RPE (as required by the product label and/or COSHH Assessment) ☐ • observance of pesticide manufacturers instructions for mixing sequence and agitation (or other recommended method) ☐ • suitable site selected ☐ • clean water supply ☐ • accurate measurement of water ☐ • accurate measurement of pesticide ☐ • use of filling device (if fitted) ☐ • avoidance of spillage ☐ **Met ✓ Not Met X** ☐				
Unit 122 **5.2**	Demonstrate safe and accurate application procedures	Candidate to describe **two** possible methods of marking out the site to achieve accurate spraying	May include: • crop rows ☐ • marker poles ☐ • GPS ☐				
		Candidate to **state two** effects of increasing the air flow	May include: • a larger volume of air is produced, which can deliver the pesticide into a larger target with a higher crop density ☐ • increased risk of damage to delicate fruits or berries ☐ • a larger volume of air could create excessive spray drift ☐				
		Candidate to **explain one** reason for adjusting fan pitch (if applicable)	May include: • a larger volume of air can be produced at lower engine speeds to save fuel and machine wear ☐ • a suitable volume of air can be achieved to deliver the pesticide to the target site ☐				
		Candidate to **explain** the procedure if the tank needs refilling part way through application	May include: • mark the point where the tank emptied ☐ • measure, mix and fill with required quantities ☐ • continue application at the marked point ☐				
		Candidate to **apply** pesticide to treat a specified area appropriate to the candidate's normal work situation and sufficient to demonstrate safe and accurate application procedures	To include: • treatment area clearly identified ☐ • operate controls to start and finish application at the beginning and end of each row/bed ☐ • forward speed maintained/correct forward speed for site conditions ☐ • pressure maintained ☐ • accurate matching of bouts ☐ • obstacles dealt with correctly (if applicable) ☐ • area treated minimising overlaps and misses ☐ • awareness of changing crop density and appropriate action taken(if applicable) ☐ • awareness of changing weather conditions and appropriate action taken (if applicable) ☐ **Met ✓ Not Met X** ☐				
Unit 122 **5.3**	Carry out all activities protecting human health and the environment	**Note to the Assessor:** Assessor to be satisfied that the candidate has carried out all activities protecting human health and the environment	To include: • prevention of personal injury and contamination through correct selection and use of PPE/RPE (as required by the product information and/or COSHH/Risk Assessment) ☐ • prevention of public / bystander contamination ☐ • safe filling procedure ☐ • avoidance of excessive spray drift ☐ • avoidance of off-target application/contamination ☐ • avoidance of over dosing/under dosing crop/target ☐ **Met ✓ Not Met X** ☐				

CRITERIA NUMBER	ASSESSMENT CRITERIA	ASSESSOR GUIDANCE	ASSESSMENT ACTIVITIES	CANDIDATE A	B	C	D
Unit 122 5.4	Complete a treatment record	The candidate is required to **complete** a treatment record **Note to the Assessor:** the treatment record must be approved or if necessary supplied by the assessor	Completion of the treatment record must be: • accurate • legible (if handwritten) **Met ✓ Not Met X**	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐
Unit 122 6.1	Explain how to manage surplus pesticide and dispose of waste material	Candidate to **explain one** method of managing surplus concentrate pesticide Candidate to **explain two** method of dealing with waste packaging Candidate to **explain two** methods of managing surplus dilute pesticides	Explanation may include: • return to temporary mobile store • return to fixed store Containers: • triple rinsed • placed in secure storage until disposal • returned to supplier • collected by a licensed waste disposal contractor Packaging: • thoroughly emptied • placed in secure storage until disposal • collected by a licensed waste disposal contractor Explanation may include: • back on to site as long as it is below the maximum dose rate • use on another approved crop/target • treated by specialist treatment facility on site (e.g. a lined bio bed) • collected by a licensed waste disposal contractor **Met ✓ Not Met X**	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Unit 122 6.2	Explain how to clean and decontaminate the sprayer and, if applicable, the prime mover	Candidate to **explain four** factors that need to be considered when cleaning and decontaminating the sprayer and, if applicable, the prime mover	May include: • select and use appropriate PPE/RPE • appropriate site • thorough washing with water and suitable additive if required • internal and external surfaces • use of in-built wash systems if provided • care to ensure contamination 'hot-spots' are clean • thorough flushing of systems • safe disposal of contaminated washings • when cleaning should take place • safe procedures followed **Met ✓ Not Met X**	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Unit 122 6.3	Describe the storage requirements for the sprayer	Candidate to **describe three** factors to consider prior to storing the applicator	May include: • ensure the applicator is clean and dry • inspect for wear and damage • replace any worn or damaged parts • ensure system is drained and any valves left in appropriate positions • frost protection/prevention implemented • lubricate as required • store undercover and out of direct sunlight • store in a secure area **Met ✓ Not Met X**	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Unit 123 – Operating a Variable Geometry Boom Sprayer without Air Assistance (PA3C)

Candidate A	**Name:**	**Date:**	**Start Time:**	**Duration:**
Candidate B	**Name:**	**Date:**	**Start Time:**	**Duration:**
Candidate C	**Name:**	**Date:**	**Start Time:**	**Duration:**
Candidate D	**Name:**	**Date:**	**Start Time:**	**Duration:**

CRITERIA NUMBER	ASSESSMENT CRITERIA	ASSESSOR GUIDANCE	ASSESSMENT ACTIVITIES	CANDIDATE A	B	C	D
Unit 123 **1.1**	Describe the legal requirements relating to applying pesticides using variable geometry boom sprayers without air assistance	Candidate to **describe two** operator's obligations in terms of legal requirements	May include: • all required guards are in place and equipment complies with legal requirements • comply with all relevant road traffic regulations when operating or transporting on the public highway • comply with The Plant Protection Products (Sustainable Use) Regulations 2012 • the operator must hold the appropriate certification for the equipment they are using **Met✓ Not Met X**	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐
Unit 123 **1.2**	Describe how to apply pesticides safely using variable geometry boom sprayers without air assistance following industry best practice	Candidate to **describe one** operator safety regulation in terms of using variable geometry boom sprayers	May include: • comply with Pesticide Codes of Practice • adopt industry best practice • be aware of any safety implications imposed by Risk/COSHH Assessment and comply with the requirements	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐
		Candidate to **describe two** precautions the operator may take to protect self from pesticide contamination when operating the prime mover	sealed cab: • fit carbon filter • use of in-cab controls • ensure ventilation system is functional • close all windows • contaminated PPE stored in external locker • awareness of the siting of pressurised components within confines of cab	☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐
		When preparing the prime mover and sprayer, the candidate is to **describe three** checks which the operator may carry out to protect self from physical danger during operation	open cab/canopy/platform: • use of appropriate PPE • awareness of the siting of pressurised components within confines of cab/canopy/platform May include: • compatibility of prime mover and sprayer • front weights • wheel track width • correct tyre pressures • condition of tyres • brake function	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
		Candidate to **state four** aspects of safe practice to be considered when driving on uneven/sloping terrain	May include: • assess conditions • select four wheel drive • appropriate speed • correct gear selection • effect of changing load on stability • use of weights to stabilise prime mover • correct turning procedure • keep centre of gravity as low as possible	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
		Candidate to **state one** consideration for safe driving on a public highway	May include: • independent brakes coupled together • travelling at high speed makes vehicle unstable **Met ✓ Not Met X**	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐	☐ ☐ ☐

CRITERIA NUMBER	ASSESSMENT CRITERIA	ASSESSOR GUIDANCE	ASSESSMENT ACTIVITIES	CANDIDATE A	B	C	D
Unit 123 **2.1**	Identify risks to the environment	Candidate to **identify all relevant** risks to the environment for the application site	May include: • ground conditions • water courses • environmental margins/strips/areas • drains • boreholes • wildlife • non-target plants • sensitive crops/areas • hedgerows • housing • public access • other risks particular to the site **Met ✓ Not Met X**	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Unit 123 **2.2**	Explain how to minimise risks to the environment	Candidate to **explain** how to minimise the risks identified in **2.1**	May include: • use an appropriate pesticide (minimal environmental impact) • careful timing of application • check and maintain application rate • avoid off target application • observe buffer zones • comply with LERAP requirements • erect warning signs • notify neighbours	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
		Candidate to **state** the reason for minimising off target application and spray drift	• avoidance of contamination to people and the environment	☐	☐	☐	☐
		Candidate to **check and comment** on wind speed and direction	• use of anemometer or visual signs at suitable height • wind direction	☐ ☐	☐ ☐	☐ ☐	☐ ☐
		Candidate to **state five** factors that affect spray drift	May include: • weather conditions • direction of spraying • presence of natural/living windbreaks • nozzle type and size • pressure • forward speed • nozzle configuration • boom geometry • target canopy density **Met ✓ Not Met X**	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Unit 123 **3.1** **Unit 123** **3.2** **Continued**	Read product information Interpret product information	The candidate is required to **read** and **interpret** the information on a product label and provide **relevant** information as requested by the Assessor **Note to the Assessor**: A product label is required. It is expected that the candidate will provide the product label. The label provided must be for a currently approved product and appropriate to the candidates normal work situation **Note to the Candidate (Assessor also to note)**: It is acceptable for key information on the label to be highlighted for use during the assessment	May include the following: • product name • active substance(s) (ingredient(s)) important information: • field of use • crop/target • maximum individual dose • maximum total dose • maximum number of treatments • specific product precautions/warnings • operator protection • environmental protection • restrictions on use	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

CRITERIA NUMBER	ASSESSMENT CRITERIA	ASSESSOR GUIDANCE	ASSESSMENT ACTIVITIES	CANDIDATE A	B	C	D
Cont…			crop specific information:				
Unit 123			• crop/target	☐	☐	☐	☐
3.1			• dose rate	☐	☐	☐	☐
			• water volume	☐	☐	☐	☐
			• timing	☐	☐	☐	☐
Unit 123			mixing and spraying:				
3.2			• filling	☐	☐	☐	☐
			• recommended nozzles	☐	☐	☐	☐
			• recommended pressure	☐	☐	☐	☐
			• spray quality	☐	☐	☐	☐
			• additional label information	☐	☐	☐	☐
			• compatibility	☐	☐	☐	☐
			Met ✓ Not Met X	☐	☐	☐	☐
Unit 123 4.1	Identify applicator controls and components	Candidate to **identify all** components and controls relating to the applicator being used for the assessment	May include:				
			• main spray tank	☐	☐	☐	☐
			• clean water tank	☐	☐	☐	☐
			• hand wash tank	☐	☐	☐	☐
			• pump	☐	☐	☐	☐
			• pulsation damper	☐	☐	☐	☐
			• filling control and devices	☐	☐	☐	☐
			• agitation control	☐	☐	☐	☐
			• pressure adjustment control	☐	☐	☐	☐
			• pressure gauge	☐	☐	☐	☐
			• on/off	☐	☐	☐	☐
			• boom break-backs	☐	☐	☐	☐
			• boom isolators	☐	☐	☐	☐
			• boom section pressure compensation controls	☐	☐	☐	☐
			• filters	☐	☐	☐	☐
			• nozzles	☐	☐	☐	☐
			• diaphragm check valves	☐	☐	☐	☐
			• tank wash system	☐	☐	☐	☐
			• tank drain	☐	☐	☐	☐
			• other components/controls specific to the applicator	☐	☐	☐	☐
		Identify and explain the use of **one** type of nozzle, which could be that intended for use	May include:				
			• hollow cone – good coverage	☐	☐	☐	☐
			• hollow cone air inclusion – drift reduction properties	☐	☐	☐	☐
			• flat fan – general purpose	☐	☐	☐	☐
			Met ✓ Not Met X	☐	☐	☐	☐
Unit 123 4.2	Carry out pre use checks to the prime mover	Candidate to **carry out all** pre-use checks **relevant** to the prime mover being used for the assessment	May include:				
			• guards in place and in good condition	☐	☐	☐	☐
			• visual inspection of the wheels and tyres	☐	☐	☐	☐
			• tyre pressures	☐	☐	☐	☐
			• fuel level adequate	☐	☐	☐	☐
			• engine oil level is within acceptable limits	☐	☐	☐	☐
			• hydraulic oil level is within acceptable limits (if accessible)	☐	☐	☐	☐
			• transmission oil level is within acceptable limits (if accessible)	☐	☐	☐	☐
			• coolant level is adequate	☐	☐	☐	☐
			• engine air filter is clean	☐	☐	☐	☐
			Met ✓ Not Met X	☐	☐	☐	☐

CRITERIA NUMBER	ASSESSMENT CRITERIA	ASSESSOR GUIDANCE	ASSESSMENT ACTIVITIES	CANDIDATE A	B	C	D
Unit 123 **4.3**	Carry out pre-use and operational checks to the sprayer	Candidate to **carry out all** pre-use and operational checks to the sprayer/applicator	May include all/some of the following as applicable to the sprayer/applicator:				
		Check security of attachment of applicator mechanisms	• safe unfolding of booms to avoid personal contamination and contact with Over Head Power Lines (OHPL) and any other overhead hazards	☐	☐	☐	☐
			• fasteners tight	☐	☐	☐	☐
			• straps inspected and adjusted if necessary	☐	☐	☐	☐
			• linkage secure	☐	☐	☐	☐
			• sideways movement restricted	☐	☐	☐	☐
			• drawbar pin secured	☐	☐	☐	☐
		Check for mechanical defects	• seized, worn or damaged controls/components	☐	☐	☐	☐
			• electrical connectors	☐	☐	☐	☐
		Check that the applicator is lubricated correctly	• identification of lubrication points	☐	☐	☐	☐
			• visual inspection of lubrication points	☐	☐	☐	☐
			• visual inspection of levels	☐	☐	☐	☐
		Check boom settings, suspension and break-back devices	• boom suspension operational	☐	☐	☐	☐
			• break-back efficiency	☐	☐	☐	☐
			• height adjustment	☐	☐	☐	☐
		Remove, clean and refit a filter	Candidate to:				
			• remove and clean using appropriate method	☐	☐	☐	☐
			• contain spillage	☐	☐	☐	☐
			• check for defects, replace if damaged	☐	☐	☐	☐
			• refit	☐	☐	☐	☐
		Remove, clean/replace and refit a nozzle/restrictor	Candidate to:				
			• remove and clean using appropriate method	☐	☐	☐	☐
			• contain spillage	☐	☐	☐	☐
			• check for defects replace if worn/damaged	☐	☐	☐	☐
			• refit	☐	☐	☐	☐
		Explain how to use the control panel to ensure that the applicator is functioning correctly (if applicable)	May include:				
			• functions of control panel	☐	☐	☐	☐
			• recognition of malfunctions before and during operation	☐	☐	☐	☐
			• check accuracy of base settings	☐	☐	☐	☐
			• switch to manual/test mode where applicable	☐	☐	☐	☐
		Part fill applicator	To include:				
			• suitable site selected	☐	☐	☐	☐
			• fill by usual on-site method, following approved procedures	☐	☐	☐	☐
			• clean water supply	☐	☐	☐	☐
		Check applicator for leaks and correct spray patterns	May include:				
			• use higher than normal operating pressure	☐	☐	☐	☐
			• visual check of all nozzles/atomisers for correct spray patterns, absence of blockages, streaking, pulsing	☐	☐	☐	☐
			• correct alignment	☐	☐	☐	☐
			• replace defective nozzles/atomisers/discs	☐	☐	☐	☐
			• lids and seals	☐	☐	☐	☐
			• pipe work and connections	☐	☐	☐	☐
			• control valves	☐	☐	☐	☐
			• filters	☐	☐	☐	☐
			• pressure gauge	☐	☐	☐	☐
			• diaphragm check valves	☐	☐	☐	☐
		State one suitable action in the event of the control panel failing (if applicable)	May include:				
			• stop pesticide application	☐	☐	☐	☐
			• manual operation of controls if possible	☐	☐	☐	☐
			Met ✓ Not Met X	☐	☐	☐	☐

CRITERIA NUMBER	ASSESSMENT CRITERIA	ASSESSOR GUIDANCE	ASSESSMENT ACTIVITIES	CANDIDATE A	B	C	D
Unit 123 **4.4**	Calibrate the sprayer and record relevant data	Candidate is required to **calibrate** the applicator and record **relevant** data	Calibration may include the following:				
		Select and record forward speed	• suitable forward speed for crop/target and ground conditions	☐	☐	☐	☐
			• appropriate gear selected and engine speed established	☐	☐	☐	☐
			• accurate measurement of distance	☐	☐	☐	☐
			• accurate measurement of time taken to cover distance	☐	☐	☐	☐
			• correct use of formula to establish forward speed	☐	☐	☐	☐
		Calculate required output/volume rate	• correct use of formula	☐	☐	☐	☐
		Select appropriate nozzle using manufacturers literature (if available)	• use of manufacturers operators handbook	☐	☐	☐	☐
			• use of nozzle manufacturers literature	☐	☐	☐	☐
			• confirm requirements of product label	☐	☐	☐	☐
		Set operating pressure	• pressure as determined by nozzle chart	☐	☐	☐	☐
			• pressurise/purge appropriate to the system	☐	☐	☐	☐
		Check sprayer output	• check output	☐	☐	☐	☐
			• compare with target output	☐	☐	☐	☐
			• vary pressure to make small adjustments	☐	☐	☐	☐
			• change nozzles if required	☐	☐	☐	☐
			• or any other acceptable method	☐	☐	☐	☐
		State four pieces of calibration data that should be recorded	May include:				
			• registration number of vehicle	☐	☐	☐	☐
			• tyre size and pressure	☐	☐	☐	☐
			• gear selected	☐	☐	☐	☐
			• engine speed	☐	☐	☐	☐
			• vehicle forward speed	☐	☐	☐	☐
			• application volume	☐	☐	☐	☐
			• nozzles fitted	☐	☐	☐	☐
			• nozzle positions	☐	☐	☐	☐
			• pressure	☐	☐	☐	☐
			• flow rate	☐	☐	☐	☐
			Met ✓ Not Met X	☐	☐	☐	☐
Unit 123 **4.5**	Calculate quantities of pesticide and water required	Candidate to **calculate** quantities required for both a specified area and full tank	To include:				
			• amount of water required for specified area	☐	☐	☐	☐
			• amount of pesticide required for specified area	☐	☐	☐	☐
			• amount of pesticide required for full tank	☐	☐	☐	☐
			Met ✓ Not Met X	☐	☐	☐	☐
Unit 123 **5.1**	Measure the required quantities and add to the sprayer	Candidate to **measure** and **add** quantities required for the area specified in **4.5** **Note: This may be a simulated pesticide product provided by the Assessor**	To include:				
			• correct selection and use of PPE/RPE (as required by the product label and/or COSHH Assessment)	☐	☐	☐	☐
			• observance of pesticide manufacturers instructions for mixing sequence and agitation (or other recommended method)	☐	☐	☐	☐
			• suitable site selected	☐	☐	☐	☐
			• clean water supply	☐	☐	☐	☐
			• accurate measurement of water	☐	☐	☐	☐
			• accurate measurement of pesticide	☐	☐	☐	☐
			• use of filling device (if fitted)	☐	☐	☐	☐
			• avoidance of spillage	☐	☐	☐	☐
			Met ✓ Not Met X	☐	☐	☐	☐
Unit 123 **5.2** **Continued**	Demonstrate safe and accurate application procedures	Candidate to describe **two** possible methods of marking out the site to achieve accurate spraying	May include:				
			• crop rows	☐	☐	☐	☐
			• marker poles	☐	☐	☐	☐
			• GPS	☐	☐	☐	☐

CRITERIA NUMBER	ASSESSMENT CRITERIA	ASSESSOR GUIDANCE	ASSESSMENT ACTIVITIES	CANDIDATE A	B	C	D
Cont… **Unit 123** **5.2**		Candidate to **explain** the procedure if the tank needs refilling part way through application	May include: • mark the point where the tank emptied • measure, mix and fill with required quantities • continue application at the marked point	☐☐☐	☐☐☐	☐☐☐	☐☐☐
		Candidate to **explain** the appropriate procedure to follow when a nozzle/restrictor becomes blocked during an application	Explanation to include: • select and use appropriate PPE • care not to walk in contaminated crop • clean or replace nozzle/restrictor as appropriate	☐☐☐	☐☐☐	☐☐☐	☐☐☐
		Candidate to **apply** pesticide to treat a specified area appropriate to the candidate's normal work situation and sufficient enough to demonstrate safe and accurate application procedures	To include: • treatment area clearly identified • operate controls to start and finish application at the beginning and end of each row/bed • forward speed maintained/correct forward speed for site conditions • pressure maintained • accurate matching of bouts • obstacles dealt with correctly (if applicable) • area treated minimising overlaps and misses • awareness of changing crop density and appropriate action taken(if applicable) • awareness of changing weather conditions and appropriate action taken (if applicable) **Met ✓ Not Met X**	☐☐☐☐☐☐☐☐☐ ☐	☐☐☐☐☐☐☐☐☐ ☐	☐☐☐☐☐☐☐☐☐ ☐	☐☐☐☐☐☐☐☐☐ ☐
Unit 123 **5.3**	Carry out all activities protecting human health and the environment	**Note to the Assessor:** Assessor to be satisfied that the candidate has carried out all activities protecting human health and the environment	To include: • prevention of personal injury and contamination through correct selection and use of PPE/RPE (as required by the product information and/or COSHH/Risk Assessment) • prevention of public / bystander contamination • safe filling procedure • avoidance of spray drift • avoidance of off-target application/contamination • avoidance of over dosing/under dosing crop/target **Met ✓ Not Met X**	☐☐☐☐☐☐ ☐	☐☐☐☐☐☐ ☐	☐☐☐☐☐☐ ☐	☐☐☐☐☐☐ ☐
Unit 123 **5.4**	Complete a treatment record	The candidate is required to **complete** a treatment record **Note to the Assessor:** the treatment record must be approved or if necessary supplied by the assessor	Completion of the treatment record must be: • accurate • legible (if handwritten) **Met ✓ Not Met X**	☐☐ ☐	☐☐ ☐	☐☐ ☐	☐☐ ☐
Unit 123 **6.1**	Explain how to manage surplus pesticide and dispose of waste material	Candidate to **explain one** method of managing surplus concentrate pesticide	Explanation may include: • return to temporary mobile store • return to fixed store	☐☐	☐☐	☐☐	☐☐
		Candidate to **explain one** method of dealing with waste packaging	Containers: • triple rinsed • placed in secure storage until disposal • returned to supplier • collected by a licensed waste disposal contractor Packaging: • thoroughly emptied • placed in secure storage until disposal • collected by a licensed waste disposal contractor	☐☐☐☐☐☐☐	☐☐☐☐☐☐☐	☐☐☐☐☐☐☐	☐☐☐☐☐☐☐
		Candidate to **explain two** methods of managing surplus dilute pesticides	Explanation may include: • back on to site as long as it is below the maximum dose rate • use on another approved crop/target • treated by specialist treatment facility on site (e.g. a lined bio bed) • collected by a licensed waste disposal contractor **Met ✓ Not Met X**	☐☐☐☐ ☐	☐☐☐☐ ☐	☐☐☐☐ ☐	☐☐☐☐ ☐

CRITERIA NUMBER	ASSESSMENT CRITERIA	ASSESSOR GUIDANCE	ASSESSMENT ACTIVITIES	CANDIDATE A	B	C	D
Unit 123 **6.2**	Explain how to clean and decontaminate the sprayer and, if applicable, the prime mover	Candidate to **explain four** factors that need to be considered when cleaning and decontaminating the sprayer and, if applicable, the prime mover	May include: • select and use appropriate PPE/RPE • appropriate site • thorough washing with water and suitable additive if required • internal and external surfaces • use of in-built wash systems if provided • care to ensure contamination 'hot-spots' are clean • thorough flushing of systems • safe disposal of contaminated washings • when cleaning should take place • safe procedures followed **Met ✓ Not Met X**	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Unit 123 **6.3**	Describe the storage requirements for the sprayer	Candidate to **describe three** factors to consider prior to storing the applicator	May include: • ensure the applicator is clean and dry • inspect for wear and damage • replace any worn or damaged parts • ensure system is drained and any valves left in appropriate positions • frost protection/prevention implemented • lubricate as required • store undercover and out of direct sunlight • store in a secure area **Met ✓ Not Met X**	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Summary of Assessment (*The Assessor is to complete the following as appropriate)*

Candidate A	Candidate **has met** all of the assessment criteria	**Tick** ✓ ☐	The Candidate **has not** met all of the assessment criteria; **(*state reason(s)*)**	**Tick** ✓ ☐
	Signed:	**Date:**		
Candidate B	Candidate **has met** all of the assessment criteria	**Tick** ✓ ☐	The Candidate **has not** met all of the assessment criteria; **(*state reason(s)*)**	**Tick** ✓ ☐
	Signed:	**Date:**		
Candidate C	Candidate **has met** all of the assessment criteria	**Tick** ✓ ☐	The Candidate **has not** met all of the assessment criteria; **(*state reason(s)*)**	**Tick** ✓ ☐
	Signed:	**Date:**		
Candidate D	Candidate **has met** all of the assessment criteria	**Tick** ✓ ☐	The Candidate **has not** met all of the assessment criteria; **(*state reason(s)*)**	**Tick** ✓ ☐
	Signed:	**Date:**		

For use by Internal Verifier ONLY *if the assessment process was internally verified*
(Internal Verifier to complete **ONE** *of the boxes below)*

I observed an assessment process taking place and I am satisfied that the assessment was conducted in line with the qualification requirements.	**Tick** ✓ ☐
I observed an assessment process taking place. The following were noted as areas of concern.	**Tick** ✓ ☐
Signed: **Date:**	