



## Higher National Unit Specification

### General information for centres

**Unit title:** Police Operations: Large Vehicle Inspection

**Unit code:** DN98 35

**Unit purpose:** This unit is designed to enable candidates to carry out safe inspections of large motor vehicles in order to identify, evaluate and record dangerous defects and, where necessary, exercise legislative powers to prohibit the use of a large motor vehicle on a road.

On completion of the Unit the candidate should be able to:

1. Prepare to carry out a large vehicle inspection.
2. Carry out inspections in accordance with current procedures to correctly identify defects in large vehicles.
3. Report on prohibition inspections of large vehicles.

**Credit points and level:** 1 HN Credit at SCQF level 8: (8 SCQF credit points at SCQF level 8\*)

*\*SCQF credit points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification in the Framework is allocated a number of SCQF credit points at an SCQF level. There are 12 SCQF levels, ranging from Access 1 to Doctorates.*

**Recommended prior knowledge and skills:** Candidates should have background knowledge of vehicle inspection such as that gained through successful completion of the Unit, Police Operations: Light Vehicle and Motorcycle Inspection. They should have a working knowledge of the construction and operation of large goods vehicles, passenger carrying vehicles and trailers particularly with respect to power and power assisted braking systems. They should also be conversant with general police procedures achieved through experience of working as a police officer. Candidates should have successfully completed their probationary period as a police officer and associated training courses.

**Core skills:** There may be opportunities to gather evidence towards core skills in this Unit, although there is no automatic certification of core skills or core skills components.

**Context for delivery:** This unit is a stand-alone unit associated with the Professional Development Award: Diploma in Road Policing Operations.

## General information for centres (cont)

**Assessment:** This should consist of two practical assignments supplemented by oral questions on underpinning knowledge. The practical assignments should be integrated prohibition inspections of motor vehicles during which candidates inspect vehicles for defects and decide whether or not a prohibition notice should be issued. Candidates should complete the formal documentation required for each assignment.

Candidates should also take an examination on underpinning knowledge. All assessments should be open book to allow candidates access to relevant documents on the categorisation of defects.

## Higher National Unit specification: statement of standards

**Unit title:** Police Operations: Large Vehicle Inspection

**Unit code:** DN98 35

The sections of the Unit stating the Outcomes, knowledge and/or skills, and evidence requirements are mandatory.

(If you think holistic assessment is the best assessment strategy for the Unit and you wish to state *Knowledge and/or Skills* and *Evidence requirements* for the Unit as a whole, please add the following statement here: ‘Please refer to *Knowledge and/or skills for the Unit* and *Evidence requirements for the Unit* after the Outcomes.’)

Where evidence for Outcomes is assessed on a sample basis, the whole of the content listed in the knowledge and/or skills section must be taught and available for assessment. Candidates should not know in advance the items on which they will be assessed and different items should be sampled on each assessment occasion.

### Outcome 1

Prepare to carry out a large vehicle inspection

#### Knowledge and/or skills

- ◆ Types of large vehicles
- ◆ Selection of suitable and safe site for an inspection
- ◆ Safety during inspections
- ◆ Selection of equipment for a full inspection
- ◆ Selection of suitable support information for an inspection – Vehicle Operators and Service Agency (VOSA) guides

### Outcome 2

Carry out inspections in accordance with current procedures to correctly identify defects in large vehicles

#### Knowledge and/or skills

- ◆ Methods of inspection
- ◆ Types of large vehicle operating systems
- ◆ Defects related to engine, exhaust, fuel and transmission systems
- ◆ Defects related to suspension, steering, wheels and tyres
- ◆ Defects related to brakes and braking systems
- ◆ Defects related to chassis/frame, trailer couplings, driver’s area and bodywork
- ◆ Defects related to conveyance of passengers in a passenger carrying vehicle
- ◆ Defects related to electrical equipment, road lamps and reflectors

## **Higher National Unit specification: statement of standards (cont)**

**Unit title:** Police Operations: Large Vehicle Inspection

### **Outcome 3**

Report on prohibition inspections of large vehicles

#### **Knowledge and/or skills**

- ◆ Use of suitable documentation
- ◆ Identification of, and information on, motor vehicle
- ◆ Particulars of the inspection
- ◆ Current statutory offences and powers to prohibit the use of motor vehicles
- ◆ Inclusion of relevant and comprehensive supporting evidence

#### **Evidence requirements for the Unit**

Candidates must provide evidence to show that they can meet all the knowledge and/or skills items from all three outcomes.

They must demonstrate that they can correctly carry out two inspections on vehicles with known defects. One inspection must be of a passenger carrying vehicle (PCV) and the other must be of a large goods vehicle (LGV). The inspections will be in a simulated environment based on situations candidates are likely to face in an operational context.

Defects, in the form of offences for which prohibitions may be issued, will be placed on one or both of the vehicles and candidates will be required to:

- ◆ Locate and identify the pertinent defect(s) and determine how they relate to the vehicle systems
- ◆ Classify the severity of the defect and show how it affects the vehicle in relation to road safety
- ◆ Determine whether they will / will not issue a prohibition notice
- ◆ Properly complete the necessary documentation, including records of vehicle inspection, to the correct standards.

Each inspection must be conducted in controlled conditions and must be completed within a maximum of 40 minutes. Each inspection should be recorded on a correctly completed Vehicle Inspection Form and be accurate and comprehensive with respect to knowledge and/or skills in all Outcomes. Critical faults and potential hazards should be correctly identified.

After each inspection, candidates will be given additional information. Candidates must, within a maximum of 30 minutes, complete relevant prohibition form(s) in accordance with the correct standards.

In addition, candidates must provide evidence consisting of answers to an examination on underpinning knowledge relating to large vehicle examinations and prohibitions. The examination will consist of 15 questions and will be open book and candidates must achieve a mark of at least 75%. The examination will last for 75 minutes.

## **Higher National Unit specification: statement of standards (cont)**

### **Unit title: Police Operations: Large Vehicle Inspection**

During all aspects of evidence generation, candidates should have access to relevant guidelines on the categorisation of defects in motor vehicles and on police powers of prohibition. For the examination, candidates may also bring with them notes on mechanical theory. The specific documents which candidates may refer to should be specified in advance of any assessment.

To ensure full coverage of all knowledge and/or skills items, candidates may also provide evidence in the form of responses to specific assessor questions on underpinning knowledge and understanding on all aspects of vehicle inspections.

All evidence must relate to the legislation and regulations in force at the time at which evidence is generated.

### **Assessment guidelines for the Unit**

Assessment for the unit could consist of two integrated practical assignments whereby candidates must correctly identify any dangerous defects in motor vehicles and determine whether or not a prohibition notice should be issued. Candidates should provide suitably completed documentation in conjunction with these inspections. The practical assignments may be supplemented by oral questions of underpinning knowledge and by written reports of the practical inspections.

Candidates should also complete an examination on relevant underpinning knowledge. All assessments should be open book as candidates require access to relevant documentation on the categorisation of defects and related issues.

Candidates could generate assessment evidence as the unit progresses although it would be possible to administer all assessments towards the end of the unit. By this time, candidates will have had the opportunity to become fully aware of all the aspects involved in carrying out prohibition inspections of motor vehicles. If assessment is carried out at the end of the unit, it may be helpful to carry out several formative assessments during the delivery of the unit. In this way candidates can monitor their progress against each knowledge and/or skills item.

## **Administrative Information**

<b>Unit code:</b>	DN98 35
<b>Unit title:</b>	Police Operations: Large Vehicle Inspection
<b>Superclass category:</b>	ZJ
<b>Date of publication:</b>	July 2005
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## **Higher National Unit specification: support notes**

### **Unit title:** Police Operations: Large Vehicle Inspection

This part of the Unit specification is offered as guidance. The support notes are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 40 hours.

### **Guidance on the content and context for this Unit**

This unit is intended for police officers who carry out inspections of large vehicles. Candidates will normally be following a recognised training programme such as that provided by the Road Policing Division of the Scottish Police College. This is a stand-alone unit associated with the Professional Development Award: Diploma in Road Policing Operations. It follows on from the unit, Police Operations: Light Vehicle and Motorcycle Inspection.

The unit stresses the importance of taking appropriate action to prohibit the use of a dangerous motor vehicle on a road. In order to do this effectively, candidates should be able to interpret the information gathered at an inspection to correctly identify defects in motor vehicles. They should also be able to relate the defects identified to current police powers and legislative requirements.

The following notes give some additional information on each outcome. For all outcomes, candidates should be aware of statutory requirements and relevant police procedures, including powers granted to the police. The legislation and procedures should be those which are in force at the time the unit is delivered.

#### **Outcome 1**

Types of large vehicles: heavy goods, articulated, passenger carrying vehicle (PCV).

Safe and suitable site: sufficient space, free from hazards, level site, Force policy, risk assessment.

Methods of inspection: Vehicle Examination Form, routine.

Inspection equipment: levers; inspection lamps; access crawlers; protective clothing and equipment.

Support information: inspection checklists; VOSA guides – VOSA Motor Vehicle Defect Guide, VOSA Categorisation of Defects Guide; VOSA Tester's Manual.

#### **Outcome 2**

Types of defects: serious, immediate, supported by legislation, categorisation, within VOSA guides

Safety driving inspections: parking brakes, wheel chocks.

Types of large vehicle operating systems: engine, transmission.

#### **Engine, fuel, exhaust systems**

- ◆ Engine mounting: security
- ◆ Oil leaks: oil contamination of components; excessive leakage; fire risk

## Higher National Unit specification: support notes (cont)

### Unit title: Police Operations: Large Vehicle Inspection

- ◆ Fuel tank and system: security of tank and pipe mountings; fuel – leakage, spillage, tank cap security; fire risk
- ◆ Exhaust system: security; leakage; excessive noise; excessive smoke emission; fire risk
- ◆ Gear box: security and mountings; oil leaks

#### Transmission

- ◆ Propeller shaft: damage; distortion
- ◆ Propeller shaft coupling; wear; belt security
- ◆ Road wheel and hub: damage; distortion; security
- ◆ Wheel nuts/studs: loose; missing
- ◆ Tyre retaining stud: abutment
- ◆ Half shaft nut/stud: security
- ◆ Wheel fitting: incorrect
- ◆ Tyres: wear; fitting; fouling; type; size; mixing; damage; pressure; direction of rotation
- ◆ Stub axles and wheel bearings: wear; security; free movement

#### Suspension

- ◆ Leaf spring defects: leaf fracture; fouling; location; centre bolt fracture/location; shackle pin wear/security; slipper bracket security; anchor bracket security; retaining bolt security
- ◆ Coil spring defects: fracture; security
- ◆ Torsion bar defects: fracture; security
- ◆ Rubber spring defects: deterioration; security
- ◆ Air suspension defects: leakage; deterioration; damage; fouling; levelling valve wear/damage; radius arm damage/security
- ◆ Shock absorbers defects: location; security
- ◆ Anti-roll bar defects: fracture; security
- ◆ Trailing arms: security; free movement; alignment

#### Steering

- ◆ Steering wheel free play: excessive
- ◆ Steering wheel and column: security
- ◆ Steering box: operation; security; damage
- ◆ Steering linkage: wear; damage; fracture; fouling; security; retaining device locking
- ◆ Power assisted steering: operation; damage; leakage; pipe fouling/damage; security

#### Brakes and Braking Systems

- ◆ Foot pedal: operation; travel; security
- ◆ Hand brake lever: operation; travel; security; locking
- ◆ Machine hand lever: operation; travel; security
- ◆ Air brake hand control valve: operation; travel; security; locking
- ◆ Air pressure warning system: operation
- ◆ Air pressure/vacuum: build up time: leakage; operation
- ◆ Air brake actuators: excessive travel; operation; leakage
- ◆ Brake servo: operation; damage; security; leakage
- ◆ Air/vacuum reservoir: security; corrosion; leakage
- ◆ Brake valves: operation; damage; security; leakage
- ◆ Hydraulic cylinders: operation; damage; corrosion; leakage

## Higher National Unit specification: support notes (cont)

### Unit title: Police Operations: Large Vehicle Inspection

- ◆ Fluid level: incorrect
- ◆ Brake pipes/couplings: damage; fouling; corrosion; security; deterioration
- ◆ Friction materials: excessive wear; contamination
- ◆ Drums/discs: fracture: security
- ◆ Vehicle service brake: operation and performance
- ◆ Vehicle secondary brake: operation and performance
- ◆ Vehicle parking brake: operation and performance
- ◆ Trailer service brake: operation and performance
- ◆ Trailer secondary brake: operation and performance
- ◆ Trailer emergency brake: operation and performance
- ◆ Trailer parking brake: operation and performance

#### Vehicle chassis and attachments:

- ◆ Chassis member: damage; corrosion; fracture; security
- ◆ Trailer coupling: security; wear; damage; locking

#### Trailer couplings:

- ◆ Trailer coupling: security; wear; damage; fracture; locking
- ◆ Drawbar attachment pin: security; wear; damage; locking
- ◆ Landing legs: security; damage; pad/wheel security

#### Driver's cab and body:

- ◆ Battery: security; leakage; fume isolation
- ◆ Driving controls: security
- ◆ Floor/step: security; wear
- ◆ Driver's seat: security; adjustment locking
- ◆ Rear view mirrors: adequacy; security
- ◆ Wiper/washer: operation
- ◆ View to the front: impaired
- ◆ Horn: operation
- ◆ Cab doors/hinges: security; obstruction; opening; closure
- ◆ Driver's cab: obstruction
- ◆ Body mounting and fittings: security; alignment
- ◆ Cab mounting: security; tilt cab locking
- ◆ Wind deflector: security
- ◆ Body panelling and guard rails: security; damage; protrusions
- ◆ Wings and wheel arch: security; corrosion; wear; clearance
- ◆ Windscreen and windows: type of glass; damage; security; vision impairment
- ◆ Spare wheel and bracket: security

#### Passenger carrying vehicle (PCV)

- ◆ Windscreen and windows: type of glass; damage; security; vision impairment
- ◆ Floors/gangways/steps/stairs: damage; weakness; hazards; excessive wear; security
- ◆ Passenger entrance: wear; operation
- ◆ Passenger seats: security; fracture; hazards
- ◆ Parcel rack guard: security
- ◆ Roof lighting: security; operation

## Higher National Unit specification: support notes (cont)

### Unit title: Police Operations: Large Vehicle Inspection

- ◆ Bell/buzzer: operation
- ◆ Engine cover: security; fire hazard
- ◆ Passenger grab rail: security
- ◆ Passenger door: power operation; manual operation; security; retained open; retained closed; sensitive edge operation; door open warning; hazards
- ◆ Flap type/luggage compartment doors: security; protrusion; hold open; floor security
- ◆ Battery isolator switch: operation
- ◆ Wiring: security; fire hazard
- ◆ Entrance/exit illumination: operation; adequacy
- ◆ Engine emergency stop control: operation

#### Road lamps and reflectors

- ◆ Obligatory front side lamps: security
- ◆ Obligatory rear position lamps: operation; security
- ◆ Rear fog lamp: security
- ◆ Obligatory reflectors: security
- ◆ Obligatory end-outline markers: security
- ◆ Rear marking: location; security
- ◆ Direction indicators: operation; security; obstruction
- ◆ Obligatory headlamps: operation; security; aim; dip operation
- ◆ Obligatory stop lamps: operation; security

#### Outcome 3

Information on motor vehicle: vehicle owner/operator/driver; vehicle mileage; date and time of inspection; state of the vehicle when inspected (laden or unladen); identification of maintenance related defects

Support information: Prohibition Notice Form PG9; Exemption Notice Form PG9B.

### Guidance on the delivery and assessment of this Unit

This unit can be delivered on a stand-alone basis or as part of a training programme for police officers involved in road policing operations.

The underpinning knowledge can be taught in a classroom environment. This can be combined with practical tasks in a workshop where candidates can get access to a range of motor vehicles. Inspection must be conducted in accordance with the requirements of VOSA testers' manuals and relevant guides produced by VOSA. Hence, candidates should get access to copies of them to ensure that they use suitable methods of inspection and apply the appropriate standards to their inspection work.

## **Higher National Unit specification: support notes (cont)**

### **Unit title: Police Operations: Large Vehicle Inspection**

Assessment should test the ability of candidates to correctly identify dangerous defects in motor vehicles by carrying out prohibition inspections using appropriate methods and procedures. This should be done by integrated vehicle inspections supplemented by written and oral tests of underpinning knowledge. These could be left until the end of the delivery period of undertaken at intervals during it. If summative assessment is undertaken towards the end to the delivery period, candidates may benefit from formative assessment during the delivery of the unit.

The importance of safety and the use of safe working practices should be emphasised throughout the delivery and assessment of the unit.

### **Open learning**

This unit could be partially delivered by Open Learning if desired as this would be a suitable way to enable candidates to acquire the relevant underpinning knowledge of inspection methods and procedures as well as the relevant legislation. However, candidates who take an Open Learning route would need to find opportunities to gain suitable practical experience of identifying dangerous defects. In addition, appropriate arrangements would need to be made for assessment and quality assurance.

### **Disabled candidates and/or those with additional support needs**

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering whether any reasonable adjustments may be required. Further advice can be found on our website [www.sqa.org.uk/assessmentarrangements](http://www.sqa.org.uk/assessmentarrangements).

## **General information for candidates**

### **Unit title:** Police Operations: Large Vehicle Inspection

This unit is a stand-alone unit associated with the Diploma in Road Policing Operations which is a Professional Development Award accredited by SQA.

The unit is designed to enable you to carry out inspections of large motor vehicles which comprise heavy goods vehicles, articulated vehicles and passenger carrying vehicles. It includes preparing for inspections and reporting on them as well as actually carrying them out. It provides you with underpinning knowledge, including relevant legislation, and practical guidance which will allow you to follow the appropriate procedures to correctly identify dangerous defects in large vehicles. The unit also covers taking action to prohibit large vehicles with dangerous defects from using public roads. The unit has both classroom and practical work. For the latter, it is vitally important that you adhere to all safety requirements and follow safe working practices. These are an important aspect of successful prohibition inspections also.

The assessment for the unit will be two integrated practical tests where you will be required to inspect a motor vehicle for possible defects and, on the basis of your findings, decide whether or not a prohibition notice should be issued. You will be required to complete the documentation associated with each inspection. One inspection will be of a passenger carrying vehicle while the other will be of a large goods vehicle. You must also complete an examination on underpinning knowledge and understanding relating to vehicle examinations and prohibitions. The examination will consist of 15 questions and will be open book and candidates must achieve a mark of at least 75%. The examination will last for 75 minutes.

For all assessments, you will be given access to documentation on categorisation of defects such as the Vehicle Operators and Service Agency (VOSA) guides.

You will meet all the requirements of this unit if you pass these assessments.