

Higher National Unit Specification

General information for centres

Unit title: Police Operations: Light Vehicle and Motorcycle Inspection

Unit code: DN66 35

Unit purpose: This unit is designed to enable candidates to apply current road policing procedures for full and roadside inspections of passenger cars, light goods vehicles and motorcycles and to identify, evaluate and record defects.

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

1. Prepare to carry out a roadside inspection of light vehicles and motorcycles.
2. Carry out inspections in accordance with current road policing procedures to correctly identify faults and potential hazards in light vehicles and motorcycles.
3. Report on inspections of light goods vehicles and motorcycles.

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

**SCQF 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 points at an SCQF level. There are 12 SCQF levels, ranging from Access 1 to doctorates.*

Recommended prior knowledge and skills: Candidates should have a good working knowledge of the construction and operation of light vehicles and motorcycles. 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 mandatory unit in the Professional Development Award: Diploma in Road Policing Operations. It is recommended that it should be taught and assessed as part of this group award.

Assessment: This unit is assessed by two practical assignments and one written test of underpinning knowledge. The practical assignments should consist of integrated vehicle inspections in which candidates identify faults and hazards. Candidates should make formal written reports on the integrated inspections.

Higher National Unit specification: statement of standards

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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 roadside inspection of light vehicles and motorcycles.

Knowledge and/or skills

- ◆ Types of light vehicles and motorcycles
- ◆ Selection of suitable and safe site for an inspection
- ◆ Selection of equipment for a full inspection
- ◆ Selection of suitable support information for an inspection

Outcome 2

Carry out inspections in accordance with current road policing procedures to correctly identify faults and potential hazards in light vehicles and motorcycles.

Knowledge and/or skills

- ◆ Methods of inspection and test
- ◆ Safety requirements for an inspection
- ◆ Selection of correct methods for inspection and test
- ◆ VOSA testers’ manuals
- ◆ Faults and potential hazards related to frame and bodywork
- ◆ Faults and potential hazards related to engine, exhaust and fuel systems
- ◆ Faults and potential hazards related to steering and suspension
- ◆ Faults and potential hazards related to brakes, wheels, tyres and transmission
- ◆ Faults and potential hazards related to lights, auxiliaries and instruments

Higher National Unit specification: statement of standards (cont)

Unit title: Police Operations: Light Vehicle and Motorcycle Inspection

Outcome 3

Report on inspections of light goods vehicles and motorcycles

Knowledge and/or skills

- ◆ Use of suitable report format
- ◆ Accurate identification of, and information on, light vehicles and motorcycles
- ◆ Current statutory offences associated with defects and potential hazards
- ◆ Inclusion of relevant and comprehensive supporting evidence
- ◆ Relationship between reports and legal evidence to support a prosecution

Evidence requirements for the Unit

Candidates must provide evidence to demonstrate that they can successfully carry out two inspections, in each case on a different vehicle. The inspections must cover two from a passenger car, a light goods vehicle or a motorcycle and will be held in controlled conditions. The knowledge and/or skills items apply to both inspections. Suitable measurement, testing and methods of inspection should be chosen and each inspection should be carried out with an awareness of the standards and requirements of the Vehicle Operators Service Agency (VOSA) testers' manuals. A suitable and safe site, equipment and supporting information should be chosen when planning the inspections.

In addition, candidates must provide evidence consisting of:

1. two written reports
 - ◆ one for a roadside inspection – which correctly identify faults and potential hazards in a given example of a passenger car or a light goods vehicle or a motorcycle
 - ◆ one covering a full inspection (i.e. at a Police Garage or Vehicle Testing Station) – which correctly identify faults and potential hazards in a given example of a passenger car or a light goods vehicle or a motorcycle. The report from this inspection should include a witness statement for the prosecuting authority.

Each inspection should be of a different type of vehicle. Candidates should not know beforehand which type of vehicle they will be inspecting.

2. answers to an examination on underpinning knowledge

The reports should be in a suitable format, using proformas if necessary and be accurate and comprehensive with respect to the knowledge and/or skills items in Outcome 3. Critical faults and potential hazards should be correctly identified.

The examination should include questions relating to knowledge and/or skills items from Outcome 2. Between them the examination and the reports should cover all aspects of the knowledge and/or skills items. The examination should consist of 35 multiple choice questions and candidates must achieve a mark of at least 75%. Candidates will have 53 minutes in which to complete the examination.

Higher National Unit specification: statement of standards (cont)

Unit title: Police Operations: Light Vehicle and Motorcycle Inspection

The examination should be closed book and held in controlled conditions. The reports should be produced by the candidate in his/her own time following the inspection which constitutes an assessment event.

Assessment Guidelines for the Unit

Assessment for the unit should consist of integrated practical assignments whereby candidates must inspect light vehicles and motorcycles vehicles in order to identify faults and potential hazards. Candidates will carry out two practical examinations on vehicles and must correctly identify faults and potential hazards. Each examination should cover a different vehicle. Each candidate should inspect two from a passenger car, a light vehicle or a motor cycle. Since, in practice, candidates would normally work in pairs during road traffic patrols, it is acceptable to assess two candidates together. Where this takes place, evidence should be provided by way of assessor questions/checklist to supplement other evidence of inspection, ensuring both candidates have demonstrated competence.

The inspections should be supplemented by written reports of practical inspections and by a written test of underpinning knowledge.

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 a roadside inspection and a full examination of passenger cars, light vehicles and motor cycles. 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

Unit code:	DN66 35
Unit title:	Police Operations: Light Vehicle and Motorcycle Inspection
Superclass category:	ZJ
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Source:	SQA

History of Changes:

Version	Description of change	Date
02	In the Evidence Requirements, the number of multiple choice questions has been increased from 25 to 35 and the time allowed for the examination from 38 minutes to 53 minutes. The reason for this change is that 25 multiple choice questions do not give sufficient scope to properly test candidates' knowledge of the knowledge and skills items.	20/11/06

Source: SQA

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Higher National Unit specification: support notes

Unit title: Police Operations: Light Vehicle and Motorcycle 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 roadside inspections of light vehicles and motorcycles. Candidates will normally be following a recognised training programme such as that provided by the Road Policing Division of the Scottish Police College. It is one of six units which make up the Professional Development Award: Diploma in Road Policing Operations.

The unit stresses the accurate interpretation of the results of roadside inspections in terms of current legislative requirements. In order to do this effectively, candidates should be able to correctly identify faults which could present a hazard to road users.

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

Type of light vehicles: passenger cars; light goods vehicles under 3.5 tonnes gross plated weight; motorcycles (with or without sidecar) in a normal used state

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

Site selection: risk assessment; health and safety; force procedures

Support information: inspection checklists; VOSA testers' manuals; aide memoire cards

Light vehicle and motorcycle identification: make; model; registration mark; mileage; VIN; chassis or frame number; colour; type of engine

Outcome 2

Frame and bodywork

- ◆ Vehicle constructions: unitary; chassis; subframes
- ◆ Motorcycle frames: tubular; composite; alignment; distortion
- ◆ Load bearing areas: suspension mountings; body/panel mountings; steering mountings; engine/transmission mountings; sills; subframes and mountings; inner wings (valences); chassis legs; bulkheads
- ◆ Vehicle body fittings: seat belts; seat mountings; door locks and hinges; window safety glass; bumpers; mudguards; mascots
- ◆ Motorcycle fittings: panels; seats; footrests; luggage carriers; fairings
- ◆ Engine: exhaust and fuel systems

Higher National Unit specification: support notes (cont)

Unit title: Police Operations: Light Vehicle and Motorcycle Inspection

- ◆ Engine faults: oil leakage; coolant leakage; insecure mountings
- ◆ Exhaust system faults: insecure mountings; exhaust gas leakage; incomplete system; excessive noise; excessive smoke emission
- ◆ Fuel system faults: insecure pipes; insecure tank mountings; fuel leakage; incorrect filler cap

Steering and suspension

- ◆ Types of vehicle steering: rack and pinion; steering gear; power assisted; non-assisted
- ◆ Motorcycle steering: head bearings; steering dampers; front to rear wheel alignment (if appropriate)
- ◆ Steering faults: excessive free play; stiff and restricted movement; insecure mountings; leakage of lubricant; damaged rubber gaitors/seals; incorrectly locked nuts, bolts, ball pins; excessive wear of ball joints and steering pivots; damaged or distorted arms or mountings; lack of power assistance
- ◆ Types of spring: leaf, coil torsion bar; pneumatic; dampers
- ◆ Vehicle suspensions: non independent; independent; anti-roll torsion bars; Panhard rods; tie bars
- ◆ Motor cycle suspensions: spring and damper locations; leading and trailing arms
- ◆ Suspension system faults: excessive free play; insecure mountings; worn or soft mountings; ineffective dampers; broken springs

Brakes, wheels, tyres and transmission

- ◆ Types of brake units: drum; disc; solid and ventilated discs
- ◆ Vehicle braking system: hydraulic; mechanical; servo-assisted; single line; dual line
- ◆ Motorcycle braking systems: hydraulic; cable; front, rear
- ◆ Brake system faults: excessive pedal movement; excessive lever movement; insecure parking brake ratchet; damaged or seized handbrake cables; air in the hydraulic system; sinking brake pedal; fluid leakage; insufficient fluid; worn anti-slip pedal surface; oil/grease on the brake pads/linings; corroded, insecure or damaged brake pipes
- ◆ Anti-lock brake systems: operation
- ◆ Brake efficiency: Tapley Brake Performance Test
- ◆ Types of wheel construction: pressed steel; alloy; well base rim; detachable rim
- ◆ Types of tyres and size codes: cross ply; radial ply; bias belt; steel and textile bracing cords; tyre size codes, diameter, width, construction, aspect ratio, direction of rotation.
- ◆ Wheel faults: loose and missing wheel nuts, studs or bolts; incorrectly fitted wheel nuts; damaged or distorted or cracked wheels; non standard wheel sizes; mixed wheel sizes
- ◆ Tyre faults: abnormal wear, over and under inflation, scrubbing, edge wear; damage, bulges, cuts, ply separation, side wall scuffing
- ◆ Transmission system faults: oil leakage; worn universal joints and splines; insecure mountings; loose chains.

Faults and potential hazards related to lights, auxiliaries and instruments

- ◆ Obligatory lamps and auxiliaries: side; tail; number plate; rear fog; indicators; rear reflectors; instrument lights; brake lights; audible warning device (horn); wiper; screen washer; mirrors
- ◆ Optional lamps and auxiliaries: front fog; driving; reversing; rear wipe and wash
- ◆ Instruments: speedometer; warning lamps

Higher National Unit specification: support notes (cont)

Unit title: Police Operations: Light Vehicle and Motorcycle Inspection

Outcome 3

Report format: formal written report; use of proformas

General information: vehicle/motorcycle identification; registration number; make; model VIN/chassis number; registered keeper of vehicle; driver; mileage; date, time and location of inspection; persons present

Specific information: items inspected; faults identified; possible statutory offences in terms of construction and use, Road Traffic Acts and other legislation, approval and lighting regulations

Evidence: inspection report notes

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 light vehicles and motorcycles. Inspection and tests must be conducted with an awareness of the requirements of the Vehicle Operators Service Agency (VOSA) testers' manuals. Hence, candidates should get access to copies of them to ensure that they use suitable methods and techniques and apply the appropriate standards.

Assessment should test the ability of candidates to identify faults correctly in passenger cars, light vehicles and motorcycles by carrying out two inspections using appropriate methods and procedures. This could be done by integrated vehicle inspections supplemented by oral questions on underpinning knowledge. These could be left until the end of the delivery period or undertaken at intervals during it. If summative assessment is undertaken towards the end of 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 delivered partially by Open Learning 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 faults and potential hazards. In addition, appropriate arrangements would need to be made for assessment and quality assurance.

Higher National Unit specification: support notes (cont)

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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.

General information for candidates

Unit title: Police Operations: Light Vehicle and Motorcycle Inspection

This unit forms part of the Diploma in Road Policing Operations which is a Professional Development Award accredited by SQA.

The unit is designed to enable you to effectively carry out roadside inspections of light goods vehicles and motorcycles. 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 faults and potential hazards in light vehicles and motorcycles. 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 important aspects of successful roadside inspections.

The assessment for the unit will be a combination of practical tests and an examination. The examination will consist of 25 multiple choice questions and you must achieve a mark of at 75%. You will have 38 minutes to complete the examination.

You will be required to carry out two inspections. Each will be of a passenger car or a light goods vehicle or a motorcycle but you will not know beforehand which type of vehicle you will have to inspect. Each inspection will be of a different vehicle.

You will have succeeded in meeting all the requirements of this unit if you pass the examination and successfully carry out the two inspections.