



Australian Government

POLINV023 Examine a crash incident

Release: 1

POLINV023 Examine a crash incident

Modification History

Release 1. This is the first release of this unit of competency in the POL Police Training Package.

Application

This unit describes the skills and knowledge required to examine crash incidents in a road crash investigation environment. It includes applying methodologies to map or model the interaction of objects involved in a crash incident.

This unit applies to those working as police officers with responsibilities for investigating crash incidents beyond initial attendance and developing findings.

The skills and knowledge described in this unit must be applied within the legislative, regulatory and policy environment in which they are carried out. Organisational policies and procedures must be consulted and adhered to, particularly those related to work health and safety (WHS).

Those undertaking this unit would demonstrate strong autonomy, making independent decisions and accessing support from a broad range of services. They would be responsible for supervising crash investigations, providing guidance and assistance, and displaying leadership as part of routine crash investigation duties. They would perform complex tasks within familiar and/or unpredictable contexts.

No licensing, legislative or certification requirements apply to unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

Investigation.

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential Performance criteria describe the performance needed to

outcomes.

demonstrate achievement of the element.

1 Evaluate a crash incident using physics and mathematical principles

- 1.1** Calculate object and vehicle dynamics using formulae applicable to crash investigation
- 1.2** Identify angles of interaction between objects and vehicles in a crash incident
- 1.3** Interpret tyre marks and road friction evidence to determine vehicle speed and braking distances
- 1.4** Examine electronic evidence to determine vehicle speed and crash dynamics
- 1.5** Analyse object and vehicle dynamics to validate mapping and modelling

2 Map a crash incident

- 2.1** Illustrate vehicle movement and interactions using computer software
- 2.2** Use computer software to develop a map of a crash incident
- 2.3** Validate measurements to confirm accuracy of map

3 Model a crash incident

- 3.1** Develop crash incident diagrams to depict interaction of objects and vehicles involved in crash
- 3.2** Represent a crash incident graphically using vectors
- 3.3** Use specialist software to generate crash models from crash evidence
- 3.4** Interpret outcomes of calculations, maps and models to determine crash dynamics

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the POL Police Training Package Companion Volume

Implementation Guide.

Unit Mapping Information

This is a new unit. No equivalent unit.

Links

Companion Volume Implementation Guides can be found on VETNet - -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=98c3984e-2cf1-48a8-8ed1-85e4b92e7351>

Assessment Requirements for POLINV023 Examine a crash incident

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- analysing and interpreting crash evidence
- calculating and validating measurements
- determining crash dynamics
- determining vehicle speed
- producing a map of crash incident using mapping equipment and computer software
- producing a model of crash incident using specialist software.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- evidence analysis and evaluation methods
- mapping or modelling software
- mathematics and physics specific to crash investigation including:
 - acceleration and deceleration
 - airborne motion
 - coefficient of friction
 - conservation of energy and linear momentum
 - energy and forces
 - geometry and trigonometry
 - algebraic concepts
 - motion equations
 - braking factors
 - uniform acceleration motion equations
 - uniform circular motion equations
 - vectors
- measurement and degree of measurement uncertainty
- organisational policies and procedures related to work, health and safety (WHS)

- specialist crash investigation software.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Assessment must occur in workplace operational situations. Where this is not appropriate, such as in situations that can affect safety or occur only rarely, assessment can occur in simulated workplace operational situations that reflect workplace conditions.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or other simulations
- relevant and appropriate materials, tools, equipment and personal protective equipment (PPE) currently used in industry
- applicable documentation, including workplace procedures, regulations, codes of practice and operation manuals.

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