



Australian Government

POLINV021 Critically analyse complex crash incident evidence

Release: 1

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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 apply specialised vehicle crash analysis techniques within a police investigation. This includes identifying, validating and collating evidence collected from crash incidents by police investigators and determining applicable analysis methodologies.

This unit applies to those working as police officers involved in vehicle crash analysis.

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

Those undertaking this unit would be required to work autonomously and as part of a team. They would demonstrate the ability to critically analyse and evaluate crash incident related evidence to develop and test hypotheses. They would demonstrate knowledge of analysis methodologies as they apply to investigations into crash incidents. They would perform sophisticated analysis requiring strong adaptability across a broad range of 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 outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 Evaluate evidence

- 1.1** Coordinate resources and collate evidence to facilitate analysis
- 1.2** Assess evidence to determine relevance to crash analysis
- 1.3** Examine evidence to determine quality and evidentiary value
- 1.4** Verify investigation processes to ensure integrity of evidence
- 1.5** Identify limitations of evidence to inform crash analysis approach

2 Determine and apply analysis methodologies

- 2.1** Evaluate complex crash incidents to identify and select analysis methodologies
- 2.2** Interpret evidence using multiple analysis methodologies
- 2.3** Identify variables using derivatives of formulae and calculations

3 Analyse crash incidents using analysis methodologies

- 3.1** Calculate object, vehicle movement and speed using mathematics and physics
- 3.2** Analyse object and vehicle movement using kinematic equations
- 3.3** Analyse momentum and kinetic energy to establish interactions of objects and vehicles
- 3.4** Establish vehicle rollover thresholds, balance and loads to determine forces in crash incident
- 3.5** Undertake crush damage analysis to determine forces and impact speeds
- 3.6** Undertake vehicle data analysis to determine forces and impact speeds
- 3.7** Analyse object and vehicle movement using circular motion
- 3.8** Determine the direction of forces to reconstruct object and vehicle dynamics in crash incident

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>