



Australian Government

POLINV038 Analyse factors involved in crash incidents

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Modification History

Release	Comments
1	This unit of competency was first released in POL Police Training Package Release 10.0.

Application

This unit describes the skills and knowledge required to apply the underpinning and specific crash analysis methodologies which support police investigations of crash incidents. It provides the basis on which further specialist vehicle knowledge can be developed. It includes applying analysis methodologies to evidence collected as part of a crash investigation.

This unit applies to those working as police employees 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 Work Health and Safety (WHS).

Those undertaking this unit would work autonomously or as part of a team while remaining responsible for reporting to senior staff. They would demonstrate the ability to perform analysis in a broad range of contexts.

Licensing/Regulatory Information

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

Pre-requisite unit(s)

No prerequisite units.

Competency field(s)

Investigation

Unit sector(s)

N/A

Elements and Performance Criteria

Elements	Performance criteria
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Elements describe the essential outcomes.		Performance criteria describe the performance needed to demonstrate achievement of the element.	
1	Analyse systems and operations of crash incident vehicle	1 .1	Inspect vehicle features to identify class and type.
		1 .2	Classify operating features of vehicle to identify its configuration.
		1 .3	Assess vehicle's braking system and road evidence to determine braking efficiency.
		1 .4	Assess vehicle operational features and mechanical systems to verify functionality and condition.
		1 .5	Analyse damage to correlate with crash dynamics.
		1 .6	Calculate vehicle mass distribution and vehicle dimensions to determine effect on vehicle operation.
2	Analyse digital vehicle evidence	2 .1	Inspect digital data recorder systems to assess evidentiary value.
		2 .2	Review digital data to facilitate analysis.
		2 .3	Validate digital data to assess viability for analysis
		2 .4	Calculate crash dynamics and speed using digital evidence.
3	Examine human and environmental factors	3 .1	Assess occupant medical records to analyse occupant dynamics during crash incident.

		3 . 2	Evaluate interviews and statements to determine factors contributing to crash incident.
		3 . 3	Review driver information to assess experience and driving ability as factors of influence in crash incident.
		3 . 4	Determine effect of environmental factors on crash incident.
		3 . 5	Determine how human actions contributed to 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

Current Code and Title	Previous Code and Title	Comments	Equivalence
POLINV038 Analyse factors involved in crash incidents	POLINV016 Analyse complex factors involved in crash incidents	Changes include updates to: • Unit Code • Unit Title • Application • Element • Performance Criteria • Performance Evidence • Knowledge Evidence	Not equivalent

		• Assessment Conditions	
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Assessment Requirements for POLINV038 Analyse factors involved in crash incidents

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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 operational features of vehicle
- applying human factors to a crash analysis
- calculating speed and dynamics of vehicles
- calculating vehicle mass distribution and vehicle dimensions
- examining how human and environmental factors impact on a crash incident
- assessing vehicle and analysing its mechanical and electronic systems
- evaluating interviews and statements to determine factors contributing to crash incident
- assessing medical records.

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:

- crash analysis methodologies
- Safe System approach
- environmental factors that may contribute to crash incidents including:
 - geographic location
 - hazards and obstructions
 - lighting
 - road design and maintenance

- roadside furniture
 - weather conditions
- human factors impacting the operation of a vehicle including:
 - distraction
 - experience
 - fatigue
 - impairment
 - medical conditions
- faults and defects impacting vehicle operations
- operating features, standards and capabilities of vehicles including but not limited to:
 - braking systems and efficiency
 - control
 - vehicle compliance, configurations and modifications
 - motion
 - roll thresholds
 - safety equipment
 - steering
 - suspension
 - transmission
 - Advanced Driver Assistance System (ADAS) or Automated Driving System (ADS) features
- interview evaluation techniques
- medical information and records
- legislation and organisational policies and procedures related to Work Health and Safety (WHS)
- road evidence
- applicable laws and legislation
- sources of digital evidence
- standard operations and maintenance of mechanical parts and systems
- types of digital data recorder systems
- vehicle maintenance record keeping systems.

Assessment Conditions

Assessment must occur in operational workplace situations or, where this is not available, in simulated situations that replicate workplace conditions.

Assessors of this unit must satisfy relevant vocational education and training legislation, frameworks and/or standards.

Link

Companion volumes, including implementation guides, are found on the national training register - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=98c3984e-2cf1-48a8-8ed1-85e4b92e7351>.