



Australian Government

POLINV040 Analyse crashes involving motorcycles

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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 crash analysis methodologies specific to motorcycle crash incidents. It includes analysing evidence already collected by police crash investigators.

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 features of motorcycle involved in crash incident	1.1	Assess motorcycle features and configuration to determine its operating capability.
		1.2	Assess motorcycle operational features and mechanical systems to validate functionality and condition.
		1.3	Analyse motorcycle rider and pillion distribution to determine effect on motorcycle operation.
		1.4	Identify digital data recording systems to assess evidentiary value.
2	Assess human and environmental factors in a motorcycle crash	2.1	Examine type and features of rider/pillion safety clothing and equipment to assess safety standard.
		2.2	Review rider information to assess experience and driving ability as factors in crash incident.
		2.3	Assess medical records to analyse rider/pillion dynamics during crash incident.
		2.4	Evaluate interviews and statements to determine factors contributing to crash incident.
		2.5	Assess human factors to determine effect on crash.
		2.6	Assess environmental factors to determine effect on crash.
3	Apply physics and mathematics to a motorcycle crash	3.1	Identify and apply analysis methodologies to determine causal factors in motorcycle crash.
		3.2	Analyse damage to determine crash dynamics.

		3.3	Assess motorcycle braking systems and road evidence to determine braking efficiency.
		3.4	Analyse motorcycle balance and control features for crash analysis.
		3.5	Analyse lean angles in the calculation of speed.
		3.6	Examine road evidence 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

Current Code and Title	Previous Code and Title	Comments	Equivalence
POLINV040 Analyse crashes involving motorcycles	POLINV018 Analyse crashes involving motorcycles	Changes include updates to: • Unit code • Application • Elements • Performance Criteria • Performance Evidence • Knowledge Evidence • Assessment Conditions	Not equivalent

Assessment Requirements for POLINV040 Analyse crashes involving motorcycles

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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 motorcycle behaviour and damage
- analysing operational features of a motorcycle
- applying human factors to a crash investigation
- applying physics and mathematical calculations and principles to motorcycle crashes
- assessing medical information of persons in crash incident to analyse rider/pillion dynamics
- determining causal factors of a motorcycle crash
- inspecting a motorcycle and its digital and mechanical systems
- evaluating interviews and statements to determine factors contributing to a crash incident.

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:

- digital data recorder systems
- environmental factors that may contribute to a motorcycle crash incident including:
 - geographic location
 - hazards and obstructions
 - lighting
 - road design and maintenance

- roadside furniture
 - weather conditions
- evidence of motorcycle maintenance
- human factors impacting ability to operate a motorcycle including:
 - distraction
 - experience/training
 - fatigue
 - impairment
 - medical conditions
- faults and defects impacting motorcycle operations
- operating features, standards and capabilities of motorcycles including but not limited to:
 - braking systems
 - fork configuration
 - hard and soft frame
 - steering
 - suspension
 - transmission
 - tyres
- medical information and records
- methodologies for motorcycle crash analysis
- motorcycle rider safety clothing and equipment
- motorcycle standards, compliance, configurations and modifications
- operational capabilities of motorcycles including but not limited to:
 - balance
 - braking
 - control
 - lean angles
 - motion
 - pillion behaviour
 - safety equipment
- legislation, organisational policies and procedures related to Work Health and Safety (WHS)
- regulations of motorcycle road use by the rider, pillion or sidecar

- road evidence
- applicable laws and legislation
- types of motorcycles

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>.