



Australian Government

Department of Education, Employment and Workplace Relations

AURT317172A Reset steering system alignment adjustments to customer specifications

Release: 1

AURT317172A Reset steering system alignment adjustments to customer specifications

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the competence to carry out vehicle alignment pre-checks and to reset steering system alignment adjustments according to customer specifications.
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Application of the Unit

Application of the unit	<p>The unit applies to alignment procedures relative to a range of light vehicles which may include 4WD vehicles, light commercial vehicles and various types of motorsport vehicles.</p> <p>Work involves resetting wheel alignment adjustments to achieve non-standard specifications according to a customer's specifications.</p> <p>Work requires individuals to demonstrate judgement and problem-solving skills in managing own work activities and contributing to a productive team environment.</p> <p>Work is carried out in accordance with award provisions.</p>
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare to reset steering system alignment	1.1. Work instructions are used to determine job requirements, including quality, material, equipment and quantities 1.2. Job specifications are read and interpreted 1.3. OH&S requirements, including breathing protection, personal protection needs, are observed throughout the work 1.4. Material for application is selected and inspected for quality 1.5. Correct hand and power tooling are identified and checked for safe use 1.6. Products are determined to minimise waste material 1.7. Reasons for resetting alignment specifications to non-standard settings are discussed and clarified with customer
2. Carry out alignment pre-checks	2.1. Non-standard adjustment settings are confirmed as technically appropriate and are safe to carry out 2.2. Modifications made to steering and suspension system are inspected to confirm they do not make the vehicle unroadworthy if it is designed for road use 2.3. Serviceability status of components involved in alignment adjustments is confirmed 2.4. Vehicle is tested to confirm the serviceability of steering and suspension system
3. Make alignment adjustments to achieve specifications	3.1. Alignment equipment is safely connected to the vehicle according to enterprise work practices 3.2. Wheel alignment measuring equipment is used in a safe manner in accordance with manufacturer/component/ supplier/enterprise instructions and work practices 3.3. Alignment adjustments are completed without causing damage to system components and/or alignment equipment 3.4. Any alignment problems are notified and discussed with the customer prior to rework being carried out 3.5. Vehicle is tested to confirm customer requirements have been achieved
4. Complete documentation and vehicle history records	4.1. Alignment adjustment data is entered in customer's vehicle history file(s) 4.2. Customer documentation is completed and confirmed
5. Clean up work area	5.1. Material that can be reused is collected and stored

ELEMENT	PERFORMANCE CRITERIA
and maintain equipment	5.2. Waste and scrap is removed following workplace procedures 5.3. Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures 5.4. Unserviceable equipment is tagged and faults identified in accordance with workplace 5.5. Operator maintenance is completed in accordance with manufacturer/component supplier specifications and site procedures 5.6. Tooling is maintained in accordance with workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Required knowledge

A working knowledge of:

- OH&S regulations/requirements, equipment, material and personal safety requirements
- methods of accessing and interpreting manufacturer/ component supplier standard wheel alignment specifications
- principles of steering geometry, including 4WS
- implications of making non-standard alignment settings on driving and ride characteristics
- procedures for using specific enterprise wheel alignment equipment
- methods of effectively road testing a vehicle before and after wheel alignment procedures
- enterprise and customer documentation
- work organisation and planning processes
- enterprise quality processes

Evidence Guide

EVIDENCE GUIDE	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>It is essential that competence is fully observed and there is ability to transfer competence to changing circumstances and to respond to unusual situations in the critical aspects of:</p> <ul style="list-style-type: none"> • observing safety procedures and requirements • communicating effectively with others involved in or affected by the work • selecting methods and techniques appropriate to the circumstances • completing preparatory activity in a systematic manner • completing a range of steering system alignment procedures according to specifications • completing workplace records
Context of, and specific resources for assessment	<p>Application of competence is to be assessed in the workplace or simulated worksite Assessment is to occur using standard and authorised work practices, safety requirements and environmental constraints Assessment is to comply with regulatory requirements, including Australian Standards The following resources should be made available:</p> <ul style="list-style-type: none"> • workplace location or simulated workplace • material relevant to the resetting of steering system alignment adjustments • equipment, hand and power tooling appropriate to the resetting of steering system alignment adjustments • activities covering mandatory task requirements • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the automotive industry's RS&R Training Package Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge</p>

EVIDENCE GUIDE

Assessment must be by direct observation of tasks, with questioning on underpinning knowledge and it must also reinforce the integration of key competencies

Assessment may be applied under project related conditions and require evidence of process

Assessment must confirm a reasonable inference that competence is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

It is preferable that assessment reflects a process rather than an event and occurs over a period of time to cover varying quality circumstances. Evidence of performance may be provided by customers, team leaders/members or other persons subject to agreed authentication arrangements

Competence in this unit may be assessed in conjunction with other functional units which together form part of the holistic work role

EVIDENCE GUIDE**Guidance information for assessment****Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Resetting alignment specifications

Reasons for resetting alignment specifications to non-standard settings may include:

- for off-road use
- vehicle ride height is altered
- non-standard wheel and tyre combinations fitted
- variations to amounts of oversteer or understeer
- for specific motorsport requirements

Steering and suspension modifications

Types of steering and suspension modifications may include:

- modified road springs
- revised shock absorbers
- modified sway bar (stabiliser bar) fitted
- altered ride heights
- types of alignment adjustments may include:
- camber
- caster
- toe-in or toe-out
- scrub radius

Alignment equipment

Alignment equipment may include:

- two head alignment equipment
- four head alignment equipment

RANGE STATEMENT	
Vehicle history data	Types of vehicle history data may include: <ul style="list-style-type: none"> • information derived from customer • computer vehicle history files • customer vehicle history data files (hard copy version)
OH&S	OH&S requirements are to be in accordance with legislation/regulations/codes of practice and enterprise safety policies and procedures. This may include protective clothing and equipment, use of tooling and equipment, workplace environment and safety, handling of material, use of fire fighting equipment, enterprise first aid, hazard control and hazardous materials and substances
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation/regulation/codes of practice and workplace policies and practices
Safe operating procedures	Safe operating procedures are to include, but are not limited to operational risk assessment and treatments associated with vehicular movement, toxic substances, electrical safety, machinery movement and operation, manual and mechanical lifting and shifting, working in proximity to others and site visitors
Emergency procedures	Emergency procedures related to this unit are to include but may not be limited to emergency shutdown and stopping of equipment, extinguishing fires, enterprise first aid requirements and site evacuation
Environmental requirements	Environmental requirements are to include but are not limited to waste management, machine hygiene, dust and clean-up management
Quality requirements	Quality requirements are to include, but are not limited to regulations, including Australian Standards, internal company quality policy and standards and enterprise operations and procedures
Statutory/regulatory authorities	Statutory/regulatory authorities may include Federal, State/Territory and local authorities

RANGE STATEMENT	
	administering acts, regulations and codes of practice
Tooling and equipment	Tooling and equipment may include hand tooling, diagnostic and monitoring systems, meters, gauges, load testing devices, and pulling and pushing devices
Materials	Materials may include spare parts, lubricants, fluids and cleaning materials
Communications	Communications are to include, but are not limited to verbal and visual instructions and fault documenting and may include site specific instructions, written instructions, plans or instructions related to job/task, telephones and pagers
Information/documents	<p>Sources of information/documents may include:</p> <ul style="list-style-type: none"> • verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, memos, material safety data sheets, diagrams or sketches • safe work procedures related to the resetting of steering system alignment adjustments • regulatory/legislative requirements pertaining to automotive industry, including Australian Design Rules • engineer's design specifications and instructions • organisation work specifications and requirements • instructions issued by authorised enterprise or external persons • Australian Standards

Unit Sector(s)

Unit sector	Technical
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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