

New Zealand Certificate in Automotive Engineering (Level 3) [Ref: 3097]			
Level	3	Credits	120
Assessment standards aligned with qualification outcomes			
Outcome		Assessment standards	
<p>Outcome 1</p> <p>Follow workplace policies, procedures and relevant regulations to work safely and effectively in an automotive workshop</p> <p>(10 credits)</p>		<p>3856 - Identify emergency procedures in the motor and related industries. (Level 3, credits 2)</p> <p>21718 - Demonstrate knowledge of hazardous materials used in the motor industry. (Level 2, credits 2)</p> <p>23743 - Demonstrate knowledge of general legislation and regulations in the motor industry. (Level 3, credits 2)</p> <p>29579 - Demonstrate knowledge of good work habits and safe work practices in the automotive industry. (Level 2, credits 4)</p> <p>29580 - Demonstrate good work habits and safe work practices in the automotive industry. (Level 2, credits 4)</p>	
<p>Outcome 2</p> <p>Use tools and equipment to complete basic workshop engineering tasks</p> <p>(15 credits)</p>		<p>30475 - Demonstrate knowledge of motor industry engineering tasks. (Level 2, credits 2)</p> <p>30476 - Demonstrate knowledge of tools and equipment used in the motor industry. (Level 2, credits 2)</p> <p>30567 - Demonstrate knowledge of automotive tyres and wheels. (Level 3, credits 3)</p> <p>30570 - Demonstrate knowledge of welding in the motor industry. (Level 3, credits 3)</p>	
<p>Outcome 3</p> <p>Apply fundamental automotive engineering knowledge to service engine, and driveline systems</p> <p>(30 credits)</p>		<p>30434 - Service a vehicle or machine. (Level 3, credits 3)</p> <p>30437 - Demonstrate knowledge of the operation of a diesel fuel system. (Level 3, credits 2)</p> <p>30477 - Demonstrate knowledge of petrol and diesel engines. (Level 3, credits 4)</p> <p>30478 - Demonstrate knowledge of automotive lubricants. (Level 2, credits 2)</p> <p>30479 - Service an automotive cooling system. (Level 3, credits 3)</p> <p>30480 - Demonstrate knowledge of automotive cooling systems and engine coolant. (Level 3, credits 2)</p>	

	<p>30515 - Remove and refit intake and exhaust system components. (Level 3, credits 3)</p> <p>30516 - Replace driveline components. (Level 3, credits 3)</p> <p>30559 - Demonstrate knowledge of induction and exhaust systems. (Level 3, credits 4)</p> <p>30565 - Demonstrate knowledge of an automotive air conditioning system. (Level 3, credits 4)</p> <p>23927 – Demonstrate knowledge of automotive hydraulic principles (Level 3, credits 4)</p>
<p>Outcome 4</p> <p>Check operation of, and perform minor repairs on, electrical and electronic systems</p> <p>(40 credits)</p>	<p>30514 – Carry out minor servicing tasks on an ignition system. (Level 2, credits 2)</p> <p>30435 - Demonstrate knowledge of vehicle emissions. (Level 3, credits 4)</p> <p>30436 - Demonstrate knowledge of an electronic fuel injection (EFI) system. (Level 3, credits 2)</p> <p>30556 – Service an automotive battery. (Level 3, credits 3)</p> <p>30558 – Test and repair automotive electrical circuits. (Level 3, credits 5)</p> <p>30563 – Demonstrate knowledge of automotive charging and starting systems. (Level 3, credits 4)</p> <p>30564 – Demonstrate knowledge of automotive lighting. (Level 3, credits 2)</p> <p>30569 – Demonstrate knowledge of hybrid electric and battery electric vehicles or machines. (Level 3, credits 3)</p> <p>30571 - Demonstrate knowledge of the principles and testing of automotive electrical circuits. (Level 3, credits 6)</p> <p>30572 – Demonstrate knowledge of vehicle or machine batteries. (Level 2, credits 3)</p> <p>30573 – Demonstrate knowledge of a supplemental restraint system. (Level 3, credits 2)</p> <p>30574 – Demonstrate knowledge of ignition systems. (Level 3, credits 3)</p>
<p>Outcome 5</p> <p>Apply fundamental automotive engineering knowledge to service steering, suspension and brake systems</p> <p>(25 credits)</p>	<p>30517 – Service a brake system on a vehicle or machine. (Level 3, credits 4)</p> <p>30518 – Bleed a hydraulic brake system. (Level 3, credits 2)</p> <p>30519 – Service steering and suspension systems on a vehicle or machine (Level 3, credits 4)</p>

	<p>30560 – Demonstrate knowledge of clutches and manual transmissions. (Level 3, credits 3)</p> <p>30561 – Demonstrate knowledge of drivelines and final drives. (Level 3, credits 4)</p> <p>30562 – Demonstrate knowledge of automatic transmissions. (Level 3, credits 4)</p> <p>30566 – Demonstrate knowledge of steering and suspension systems. (Level 3, credits 2)</p> <p>30568 – Demonstrate knowledge of brake systems. (Level 3, credits 4)</p>
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