

New Zealand Certificate in Light Automotive Engineering (Level 4) [Ref 3450]			
<b>Level</b>	4	<b>Credits</b>	200

<b>Assessment standards aligned with qualification outcomes</b>	
<b>Outcome</b>	<b>Assessment standards</b>
<p><b>Outcome 1</b> Monitor the workplace and respond to issues as required to maintain a safe and effective workplace. (15 credits)</p>	<p>29582 - Demonstrate knowledge of customer service requirements and business responsibilities in the automotive industry. (Level 3, credits 4)</p> <p>31065 - Demonstrate knowledge of estimates and quotations in the automotive industry. (Level 4, credits 3)</p>
<p><b>Outcome 2</b> Apply the appropriate precautionary measures when servicing and repairing high risk light automotive systems. (10 credits)</p>	<p>30879 - Demonstrate knowledge of hybrid electric and battery electric vehicle or machine systems and safety. (Level 4, credits 5)</p> <p>31061 - Demonstrate knowledge of diagnosing faults in Supplemental Restraint Systems. (Level 3, credits 3)</p> <p>31052 - Diagnose and repair a Supplemental Restraint System fault. (Level 4, credits 4)</p>
<p><b>Outcome 3</b> Diagnose and repair common faults in light vehicle engines and driveline systems (55 credits)</p>	<p>30889 - Demonstrate knowledge of replacing automotive timing belts and chains. (Level 3, credits 2)</p> <p>30890 - Demonstrate knowledge of equipment used to test engine mechanical condition. (Level 3, credits 2)</p> <p>30891 - Describe engine disassembly, inspection, and reassembly. (Level 3, credits 3)</p> <p>31056 - Demonstrate knowledge of engine management system fault diagnosis. (Level 4, credits 4)</p> <p>31057 - Demonstrate knowledge of diagnosing automotive emission control system faults. (Level 3, credits 4)</p> <p>31058 - Demonstrate knowledge of a diesel engine management system. (Level 4, credits 2)</p> <p>31194 - Demonstrate knowledge of carburettor operation. (Level 3, credits 5)</p> <p>31059 - Demonstrate knowledge of electronically controlled manual transmissions. (Level 3, credits 4)</p> <p>31060 - Demonstrate knowledge of diagnosing faults in automotive driveline systems. (Level 3, credits 2)</p> <p>31050 - Diagnose and repair automotive driveline system faults. (Level 4, credits 10)</p> <p>31051 - Replace an automotive clutch assembly. (Level 4, credits 8)</p>

	<p>30886 - Diagnose the mechanical condition of an engine. (Level 4, credits 4)</p> <p>30887 - Replace an automotive timing belt or chain. (Level 4, credits 4)</p> <p>30888 - Remove, inspect and refit a cylinder head. (Level 4, credits 4)</p> <p>31048 - Diagnose and repair engine management system faults. (Level 4, credits 10)</p> <p>31049 - Diagnose and repair automotive emission control system faults. (Level 4, credits 10)</p> <p>31125 - Diagnose and repair vehicle or machine cooling system faults. (Level 4, credits 6)</p>
<p>Outcome 4</p> <p>Diagnose and repair common faults in light vehicle electrical and electronic systems</p> <p>(60 credits)</p>	<p>30885 - Demonstrate knowledge of automotive diagnostic and repair procedures. (Level 3, credits 5)</p> <p>30880 - Describe automotive electronic components, actuators, sensors and signals. (Level 3, credits 5)</p> <p>30881 - Describe automotive scan tools and oscilloscopes. (Level 4, credits 5)</p> <p>31062 - Demonstrate knowledge of automotive body electrical and electronic systems. (Level 4, credits 6)</p> <p>30882 - Describe servicing requirements of multiple automotive batteries and traction batteries. (Level 3, credits 3)</p> <p>30883 - Describe charging and starting system diagnosis. (Level 3, credits 3)</p> <p>31127 - Demonstrate knowledge of an automotive climate control system. (Level 3, credits 3)</p> <p>31124 - Diagnose and repair faults in an automotive climate control system. (Level 4, credits 6)</p> <p>30873 - Carry out diagnostic procedures using an automotive scan tool. (Level 4, credits 8)</p> <p>30874 - Carry out automotive diagnostic procedures using an oscilloscope (Level 4, credits 8)</p> <p>31053 - Diagnose and repair automotive body electrical and electronic system faults (Level 4, credits 5)</p> <p>30876 - Diagnose and rectify faults in vehicle or machine charging and starting systems. (Level 4, credits 6)</p>

<p>Outcome 5</p> <p>Diagnose and repair common faults in light vehicle steering, suspension and braking systems</p> <p>(60 credits)</p>	<p>31063 - Demonstrate knowledge of hydraulic brake system fault diagnosis (Level 4, credits 2)</p> <p>31064 - Describe the operation of vehicle electronic braking systems (Level 4, credits 4)</p> <p>31066 - Demonstrate knowledge of electronically controlled steering and suspension systems, and system fault diagnosis. (Level 4, credits 6)</p> <p>31047 - Diagnose and repair electronically controlled steering and suspension system faults. (Level 4, credits 10)</p> <p>31054 - Diagnose and repair hydraulic braking system faults. (Level 4, credits 4)</p> <p>31055 - Diagnose and repair vehicle electronic braking system faults. (Level 4, credits 8)</p>
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