#### FIELD ENGINEERING AND TECHNOLOGY, AND MANUFACTURING

#### Revision of *Motor Industry* qualifications and unit standards

| Qualifications |  |
|----------------|--|
|----------------|--|

| Qualification Titles   | Reference |
|--|-----------|
| National Certificate in Motor Industry (Diesel Fuel Injection Engineering) | 0139      |
| National Certificate in Motor Industry (Automotive Machining)              | 0371      |
| National Certificate in Motor Industry (Coachbuilding) with strands in     | 0413      |
| Passenger Service Vehicles, Commercial Vehicles, and Motor Homes and       |           |
| Caravans   |           |

#### **Unit Standards**

| Subfield       | Domain                    | ID                             |
|----------------|---------------------------|--------------------------------|
| Motor Industry | Automotive Administration | 225, 382, 386, 387, 391, 392,  |
|                |                           | 398, 986, 3384, 3888, 19634    |
|                | Automotive Air            | 881                            |
|                | Conditioning              |                                |
|                | Automotive Electrical and | 232, 899, 910, 5463, 8182      |
|                | Electronics               |                                |
|                | Automotive Fuel Systems   | 241, 930, 5451, 5452, 15385-   |
|                | and Exhaust               | 15396, 15398-15401, 15404,     |
|                |                           | 19302, 19304                   |
|                | Automotive Preventative   | 245                            |
|                | Maintenance               |                                |
|                | Automotive Preventive     | 964                            |
|                | Maintenance               |                                |
|                | Automotive Sales          | 385, 390, 3382,15412           |
|                | Automotive Workshop       | 226-228, 230, 913, 914, 950,   |
|                | Engineering               | 3879                           |
|                | Coachbuilding             | 10713                          |
|                | Engine Repairs            | 236, 878, 932, 965, 971, 2317, |
|                |                           | 11730, 15448                   |
|                | Panelbeating              | 5741, 5764, 5768, 5771         |
|                | Vehicle Bodywork          | 3861-3863, 3865, 3870, 3883,   |
|                |                           | 3885, 5739, 5746, 5763, 5767,  |
|                |                           | 16097-16099, 19632             |

The NZ Motor Industry Training Organisation (Inc) (MITO) has revised the qualifications and unit standards listed above.

#### Date new versions published

#### August 2014

New expiry date

#### December 2020

#### Reason for the revision

The change to the expiry date was in response to delays in the Targeted Review of Qualifications process. The expiry of the affected standards and qualifications was changed to 2020 to ensure that all learners enrolling in these programmes have time to complete the programmes and allow MITO time to implement programmes leading to the

replacement qualifications.

#### Main changes resulting from the revision

The expiry of the qualifications and unit standards listed above has been changed to 31 December 2020.

There were no changes to titles, levels, or credits.

#### Transition

#### National Certificate in Motor Industry (Diesel Fuel Injection Engineering) [Ref: 0139]

Versions 2, 3, 4, 5 and 6 of this qualification contain a standard that has been replaced by another standard, and which will expire in December 2014. Reverse transition has been included in this qualification to allow candidates to complete the qualification using either the expiring standard or the replacement standard.

For the purpose of this qualification, people who have gained credit for the replacement standard are exempt from the requirement to gain credit for the expiring standard – see table below.

| Credit for | Exempt from |
|------------|-------------|
| 26862      | 379         |

#### National Certificate in Motor Industry (Coachbuilding) with strands in Passenger Service Vehicles, Commercial Vehicles, and Motor Homes and Caravans [Ref: 0413]

This qualification contains a standard that has been replaced by a later standard. Reverse transition has been included in this qualification so people can complete the qualification using either the expired standard or replacement standard.

For the purpose of this qualification, people who have gained credit for the replacement standards are exempt from the requirement to gain credit for the expired standard – see table below.

| Credit for | Exempt from |
|------------|-------------|
| 21907      | 2670        |

Any person who feels they have been disadvantaged by these transition arrangements should contact MITO at the following address. All appeals will be considered on a case-by-case basis.

NZ Motor Industry Training Organisation (Inc) PO Box 10803 Wellington 6143

| Telephone | 0800 88 21 21    |
|-----------|------------------|
| Facsimile | 04 494 0006      |
| Email     | info@mito.org.nz |

# Appendix

# Detailed list of unit standards - classification, title, level, and credits

The expiry date of the unit standards listed below was extended from 31 December 2016 to 31 December 2020.

| ID    | Title   | Level | Credit | Previous<br>expiry date | New<br>expiry<br>date |
|-------|---|-------|--------|-------------------------|-----------------------|
| 225   | Identify the occupational areas and<br>structure of the New Zealand<br>Automotive Industry                | 1     | 2      | 31/12/2016              | 31/12/2020            |
| 382   | Demonstrate knowledge of payment<br>types, and carry out office<br>procedures in an automotive<br>company | 3     | 4      | 31/12/2016              | 31/12/2020            |
| 386   | Determine stock levels of<br>automotive products  | 5     | 4      | 31/12/2016              | 31/12/2020            |
| 387   | Demonstrate knowledge of stock<br>ordering, and maintain stock for an<br>automotive business              | 3     | 6      | 31/12/2016              | 31/12/2020            |
| 391   | Prepare a quotation for the supply of<br>an automotive product, repair, or<br>service                     | 3     | 3      | 31/12/2016              | 31/12/2020            |
| 392   | Maintain automotive stock and plant security  | 2     | 2      | 31/12/2016              | 31/12/2020            |
| 398   | Interpret warranties and guarantees that apply to the automotive industry                                 | 4     | 2      | 31/12/2016              | 31/12/2020            |
| 986   | Prepare and implement an<br>automotive on-the-job instruction<br>programme                                | 5     | 5      | 31/12/2016              | 31/12/2020            |
| 3384  | Demonstrate an automotive product to show its operation and use   | 3     | 3      | 31/12/2016              | 31/12/2020            |
| 3888  | Identify the occupational areas and<br>structures associated with the NZ<br>motor body industry           | 1     | 1      | 31/12/2016              | 31/12/2020            |
| 19634 | Book in work, interpret instructions, and plan the job  | 3     | 3      | 31/12/2016              | 31/12/2020            |

Engineering and Technology > Motor Industry > Automotive Administration

Engineering and Technology > Motor Industry> Automotive Air Conditioning

| ID  | Title  | Level | Credit | Previous<br>expiry date | New<br>expiry<br>date |
|-----|--|-------|--------|-------------------------|-----------------------|
| 881 | Test, service, and repair an<br>automotive air conditioning system | 4     | 4      | 31/12/2016              | 31/12/2020            |

Engineering and Technology > Motor Industry > Automotive Electrical and Electronics

| ID   | Title  | Level | Credit | Previous<br>expiry date | New<br>expiry<br>date |
|------|--|-------|--------|-------------------------|-----------------------|
| 232  | Test an automotive electrical circuit  | 2     | 8      | 31/12/2016              | 31/12/2020            |
| 899  | Carry out automotive wiring repairs and test circuits for serviceability                     | 3     | 3      | 31/12/2016              | 31/12/2020            |
| 910  | Diagnose and rectify faults in automotive instruments and gauges                             | 4     | 5      | 31/12/2016              | 31/12/2020            |
| 5463 | Explain the operation and repair<br>requirements of automotive<br>electronic control systems | 4     | 8      | 31/12/2016              | 31/12/2020            |
| 8182 | Diagnose and rectify faults in automotive electronically controlled systems                  | 4     | 6      | 31/12/2016              | 31/12/2020            |

Engineering and Technology > Motor Industry > Automotive Fuel Systems and Exhaust

| ID    | Title  | Level | Credit | Previous<br>expiry date | New<br>expiry<br>date |
|-------|--|-------|--------|-------------------------|-----------------------|
| 241   | Describe the operation of a diesel<br>fuel system and perform minor<br>servicing tasks           | 2     | 3      | 31/12/2016              | 31/12/2020            |
| 930   | Describe turbocharger operation,<br>and service a turbocharger system<br>on a vehicle or machine | 3     | 3      | 31/12/2016              | 31/12/2020            |
| 5451  | Demonstrate knowledge of<br>Cummins PT diesel fuel pumps, and<br>overhaul them                   | 4     | 6      | 31/12/2016              | 31/12/2020            |
| 5452  | Demonstrate knowledge of<br>Cummins diesel fuel injectors, and<br>overhaul them                  | 4     | 4      | 31/12/2016              | 31/12/2020            |
| 15385 | Demonstrate knowledge of Simms<br>Minimec diesel fuel injection pumps,<br>and overhaul them      | 4     | 8      | 31/12/2016              | 31/12/2020            |
| 15386 | Demonstrate knowledge of DPA<br>type diesel fuel injection pumps, and<br>overhaul them           | 4     | 8      | 31/12/2016              | 31/12/2020            |
| 15387 | Demonstrate knowledge of DPS<br>type diesel fuel injection pumps, and<br>overhaul them           | 4     | 8      | 31/12/2016              | 31/12/2020            |
| 15388 | Demonstrate knowledge of P type<br>diesel fuel injection pumps, and<br>overhaul them             | 4     | 8      | 31/12/2016              | 31/12/2020            |
| 15389 | Demonstrate knowledge of A type diesel fuel injection pumps, and overhaul them                   | 4     | 8      | 31/12/2016              | 31/12/2020            |
| 15390 | Demonstrate knowledge of VE type diesel fuel injection pumps, and overhaul them                  | 4     | 8      | 31/12/2016              | 31/12/2020            |

| ID    | Title  | Level | Credit | Previous<br>expiry date | New<br>expiry<br>date |
|-------|--|-------|--------|-------------------------|-----------------------|
| 15391 | Demonstrate knowledge of RSV<br>type diesel governors, and overhaul<br>them                            | 4     | 6      | 31/12/2016              | 31/12/2020            |
| 15392 | Demonstrate knowledge of RQ and RQV type diesel governors, and overhaul either of them                 | 4     | 6      | 31/12/2016              | 31/12/2020            |
| 15393 | Demonstrate knowledge of RAD and<br>RFD type diesel governors, and<br>overhaul either of them          | 4     | 6      | 31/12/2016              | 31/12/2020            |
| 15394 | Demonstrate knowledge of R801<br>and R901 type diesel governors,<br>and overhaul either of them        | 4     | 6      | 31/12/2016              | 31/12/2020            |
| 15395 | Demonstrate knowledge of RLD<br>type diesel governors, and overhaul<br>them                            | 4     | 6      | 31/12/2016              | 31/12/2020            |
| 15396 | Demonstrate knowledge of VE<br>diesel injection pump additional<br>devices, and overhaul them          | 4     | 8      | 31/12/2016              | 31/12/2020            |
| 15398 | Demonstrate knowledge of<br>Stanadyne diesel fuel injection<br>pumps, and overhaul them                | 4     | 8      | 31/12/2016              | 31/12/2020            |
| 15399 | Describe Caterpillar diesel fuel injection pumps, and overhaul them                                    | 4     | 12     | 31/12/2016              | 31/12/2020            |
| 15400 | Demonstrate knowledge of DPC<br>type diesel fuel injection pumps, and<br>overhaul them                 | 4     | 8      | 31/12/2016              | 31/12/2020            |
| 15401 | Demonstrate knowledge of EP9 type diesel fuel injection pumps, and overhaul them                       | 4     | 8      | 31/12/2016              | 31/12/2020            |
| 15404 | Demonstrate knowledge of diesel<br>engine air intake and exhaust<br>systems, and inspect and test them | 3     | 6      | 31/12/2016              | 31/12/2020            |
| 19302 | Demonstrate knowledge of diesel fuel injectors, and repair them  | 4     | 4      | 31/12/2016              | 31/12/2020            |
| 19304 | Describe turbocharger diagnostic<br>procedures and recondition an<br>automotive turbocharger           | 4     | 7      | 31/12/2016              | 31/12/2020            |

Engineering and Technology > Motor Industry > Automotive Preventative Maintenance

| ID  | Title   | Level | Credit | Previous<br>expiry date | New<br>expiry<br>date |
|-----|---|-------|--------|-------------------------|-----------------------|
| 245 | Select and apply lubricants and<br>sealants for automotive and related<br>industry applications | 2     | 2      | 31/12/2016              | 31/12/2020            |

Engineering and Technology > Motor Industry > Automotive Preventive Maintenance

| ID  | Title   | Level | Credit | Previous<br>expiry date | New<br>expiry<br>date |
|-----|---|-------|--------|-------------------------|-----------------------|
| 964 | Implement a schedule for an<br>automotive preventative<br>maintenance programme | 5     | 2      | 31/12/2016              | 31/12/2020            |

### Engineering and Technology > Motor Industry > Automotive Sales

| ID    | Title  | Level | Credit | Previous<br>expiry date | New<br>expiry<br>date |
|-------|--|-------|--------|-------------------------|-----------------------|
| 385   | Sell automotive products   | 3     | 4      | 31/12/2016              | 31/12/2020            |
| 390   | Promote automotive products  | 5     | 4      | 31/12/2016              | 31/12/2020            |
| 3382  | Pick, pack, and dispatch automotive parts  | 2     | 3      | 31/12/2016              | 31/12/2020            |
| 15412 | Demonstrate knowledge of<br>automotive product promotion, and<br>complete a promotional plan | 4     | 4      | 31/12/2016              | 31/12/2020            |

Engineering and Technology > Motor Industry > Automotive Workshop Engineering

| ID   | Title  | Level |   | Previous<br>expiry date | New<br>expiry      |
|------|--|-------|---|-------------------------|--------------------|
| 226  | Perform safe working practices in an automotive workshop                             | 2     | 2 | 31/12/2016              | date<br>31/12/2020 |
| 227  | Carry out general engineering tasks<br>to repair and make automotive<br>components   | 2     | 4 | 31/12/2016              | 31/12/2020         |
| 228  | Select and use hand tools and<br>workshop equipment for an<br>automotive application | 2     | 5 | 31/12/2016              | 31/12/2020         |
| 230  | Repair and manufacture automotive<br>components by oxy-acetylene gas<br>welding      | 2     | 3 | 31/12/2016              | 31/12/2020         |
| 913  | Use the oxy-acetylene process for welding and allied uses in the motor industry      | 3     | 4 | 31/12/2016              | 31/12/2020         |
| 914  | Metal-arc gas shield (MIG) weld automotive components                                | 3     | 4 | 31/12/2016              | 31/12/2020         |
| 950  | Manual metal arc weld automotive components in flat and vertical positions           | 3     | 6 | 31/12/2016              | 31/12/2020         |
| 3879 | Carry out general engineering tasks in the motor body industry                       | 2     | 4 | 31/12/2016              | 31/12/2020         |

# Engineering and Technology > Motor Industry > Coachbuilding

| ID    | Title   | Level | Credit | Previous<br>expiry date | New<br>expiry<br>date |
|-------|---|-------|--------|-------------------------|-----------------------|
| 10713 | Carry out fixed glass installation to a vehicle | 3     | 4      | 31/12/2016              | 31/12/2020            |

| Engineering and | Technoloav > | Motor Industry : | > Engine Repairs |
|-----------------|--------------|------------------|------------------|
|                 |              |                  |                  |

| ID    | Title   | Level | Credit | Previous<br>expiry date | New<br>expiry<br>date |
|-------|---|-------|--------|-------------------------|-----------------------|
| 236   | Service automotive cooling systems  | 2     | 4      | 31/12/2016              | 31/12/2020            |
| 878   | Repair an engine cooling system   | 3     | 4      | 31/12/2016              | 31/12/2020            |
| 932   | Inspect engine flywheel and fit starter ring gear   | 2     | 1      | 31/12/2016              | 31/12/2020            |
| 965   | Analyse vehicle or machine cooling<br>system problems and requirements                                | 5     | 4      | 31/12/2016              | 31/12/2020            |
| 971   | Diagnose and repair diesel engine shut-down systems   | 4     | 2      | 31/12/2016              | 31/12/2020            |
| 2317  | Service diesel engine braking<br>systems and exhaust braking<br>systems                               | 4     | 4      | 31/12/2016              | 31/12/2020            |
| 11730 | Inspect and rebuild an engine<br>crankshaft or camshaft   | 4     | 6      | 31/12/2016              | 31/12/2020            |
| 15448 | Demonstrate knowledge of engine<br>performance testing, and tune and<br>test a 4 stroke diesel engine | 4     | 7      | 31/12/2016              | 31/12/2020            |

# Engineering and Technology > Motor Industry > Panelbeating

| ID   | Title  | Level | Credit | Previous<br>expiry date | New<br>expiry<br>date |
|------|--|-------|--------|-------------------------|-----------------------|
| 5741 | Use and maintain a hydraulic body jack and attachments in the motor industry                               | 3     | 2      | 31/12/2016              | 31/12/2020            |
| 5764 | Repair a damaged glass fibre<br>reinforced plastic panel (GRP) using<br>a repair kit in the motor industry | 3     | 4      | 31/12/2016              | 31/12/2020            |
| 5768 | Remove and replace a motor vehicle fuel tank   | 3     | 2      | 31/12/2016              | 31/12/2020            |
| 5771 | Use and maintain a metal-arc gas<br>shield (MIG) welding plant in the<br>motor industry                    | 4     | 5      | 31/12/2016              | 31/12/2020            |

## Engineering and Technology > Motor Industry > Vehicle Bodywork

| ID   | Title  | Level | Credit | Previous<br>expiry date | New<br>expiry<br>date |
|------|--|-------|--------|-------------------------|-----------------------|
| 3861 | Remove and replace exterior motor<br>body parts and fit body protection<br>mouldings in the motor industry | 2     | 3      | 31/12/2016              | 31/12/2020            |
| 3862 | Remove and replace damaged<br>bolted on motor body panels in the<br>motor body industry                    | 2     | 3      | 31/12/2016              | 31/12/2020            |
| 3863 | Remove and replace road wheels in the motor industry   | 1     | 1      | 31/12/2016              | 31/12/2020            |
| 3865 | Fill and sand a repair in the motor body industry  | 2     | 2      | 31/12/2016              | 31/12/2020            |

| ID    | Title  | Level | Credit | Previous<br>expiry date | New<br>expiry<br>date |
|-------|--|-------|--------|-------------------------|-----------------------|
| 3870  | Prepare bare metal for painting in the motor body industry                                       | 2     | 2      | 31/12/2016              | 31/12/2020            |
| 3883  | Identify and use fastening systems in the motor industry   | 2     | 4      | 31/12/2016              | 31/12/2020            |
| 3885  | Demonstrate knowledge of and use<br>an oxy-acetylene welding plant in<br>the motor body industry | 2     | 4      | 31/12/2016              | 31/12/2020            |
| 5739  | Maintain security in the workplace in the motor and related industries                           | 2     | 2      | 31/12/2016              | 31/12/2020            |
| 5746  | Identify and prevent corrosion in the motor industry   | 3     | 3      | 31/12/2016              | 31/12/2020            |
| 5763  | Identify and dispose of hazardous<br>waste materials in the motor and<br>related industries      | 3     | 3      | 31/12/2016              | 31/12/2020            |
| 5767  | Demonstrate knowledge of current legislation in the motor body industry                          | 3     | 2      | 31/12/2016              | 31/12/2020            |
| 16097 | Identify, store and use hazardous<br>materials in the motor and related<br>industries            | 2     | 3      | 31/12/2016              | 31/12/2020            |
| 16098 | Perform safe work practices in the motor industry  | 2     | 4      | 31/12/2016              | 31/12/2020            |
| 16099 | Use and maintain power tools and<br>equipment in the motor body<br>industry                      | 2     | 4      | 31/12/2016              | 31/12/2020            |
| 19632 | Identify, select, and use adhesives<br>and sealants for vehicle bodywork<br>applications         | 3     | 3      | 31/12/2016              | 31/12/2020            |