

MINOR GROUP 233 ENGINEERING PROFESSIONALS

ENGINEERING PROFESSIONALS design, plan and organise the testing, construction, installation and maintenance of structures, machines and their components, and production systems and plants, and plan production schedules and work procedures to ensure engineering projects are undertaken efficiently and in a cost effective manner.

Indicative Skill Level**In Australia and New Zealand:**

Most occupations in this minor group have a level of skill commensurate with a bachelor degree or higher qualification. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification (ANZSCO Skill Level 1).

Tasks include:

- planning and designing chemical process systems, civil engineering projects, electrical power equipment and facilities, electronic components used in computer and industrial applications, mechanical equipment and systems, mining and drilling operations, and other engineering projects
- drafting and interpreting specifications, drawings and plans, and determining construction methods
- supervising the construction of structures, water and gas supply and transportation systems, and the manufacture, installation, operation and maintenance of equipment, machines and plant
- organising and managing project labour and the delivery of materials, plant and equipment
- estimating total costs and preparing detailed cost plans and estimates as tools for budgetary control
- resolving design and operational problems in the various fields of engineering through the application of engineering technology

Occupations in this minor group are classified into the following unit groups:

- 2331 Chemical and Materials Engineers
- 2332 Civil Engineering Professionals
- 2333 Electrical Engineers
- 2334 Electronics Engineers
- 2335 Industrial, Mechanical and Production Engineers
- 2336 Mining Engineers
- 2339 Other Engineering Professionals

UNIT GROUP 2331 CHEMICAL AND MATERIALS ENGINEERS

CHEMICAL AND MATERIALS ENGINEERS design and prepare specifications for chemical process systems and the construction and operation of commercial-scale chemical plants, supervise industrial processing and fabrication of products undergoing physical and chemical change, and investigate the properties of metals, ceramics, polymers and other materials and assess and develop their engineering and commercial applications.

Indicative Skill Level

In Australia and New Zealand:

Most occupations in this unit group have a level of skill commensurate with a bachelor degree or higher qualification. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification (ANZSCO Skill Level 1).

Registration or licensing may be required.

Tasks include:

- preparing designs for chemical process systems and planning control systems for processes such as those used to remove and separate components, effect chemical changes, test and evaluate fuels, transfer heat, and control the storing and handling of solids, liquids and gases
- monitoring the operation and maintenance of equipment to achieve maximum efficiency under safe operating conditions
- ensuring correct materials and equipment are used and that they conform to specifications
- diagnosing malfunctions in chemical plants and instituting remedial action
- studying product utilisation and pollution control problems
- reviewing plans for new products and submitting material selection recommendations in accordance with design specifications and factors such as strength, weight and cost
- planning and implementing laboratory operations to develop new materials and fabrication procedures for new materials to fulfil production cost and performance standards
- conferring with producers of materials, such as metals, ceramics, polymers, cements and elastomers, during the investigation and evaluation of materials suitable for specific product applications
- reviewing product failure data and implementing laboratory tests to establish or reject possible causes, and advising on ways to overcome any problems

Occupations:

- 233111 Chemical Engineer
- 233112 Materials Engineer

233111 CHEMICAL ENGINEER

Designs and prepares specifications for chemical process systems and the construction and operation of commercial-scale chemical plants, and supervises industrial processing and fabrication of products undergoing physical and chemical changes. Registration or licensing may be required.

Skill Level: 1

233112 MATERIALS ENGINEER

Investigates the properties of metals, ceramics, polymers and other materials and assesses and develops their engineering and commercial applications. Registration or licensing may be required.

Skill Level: 1

UNIT GROUP 2332 CIVIL ENGINEERING PROFESSIONALS

CIVIL ENGINEERING PROFESSIONALS design, plan, organise and oversee the construction of civil engineering projects such as dams, bridges, pipelines, gas and water supply schemes, sewerage systems, roads, airports and other structures; analyse the likely behaviour of soil and rock when placed under pressure by proposed structures and design structural foundations; analyse the static properties of all types of structures and test the behaviour and durability of materials used in their construction; plan and develop transportation systems; and estimate and monitor the construction costs of projects.

Indicative Skill Level

In Australia and New Zealand:

Most occupations in this unit group have a level of skill commensurate with a bachelor degree or higher qualification. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification (ANZSCO Skill level 1).

Registration or licensing may be required.

Tasks include:

- determining construction methods, materials and quality standards, and drafting and interpreting specifications, drawings, plans, construction methods and procedures
- organising and directing site labour and the delivery of construction materials, plant and equipment, and establishing detailed programs for the coordination of site activities
- obtaining soil and rock samples at different depths across sites and testing samples to determine strength, compressibility and other factors that affect the behaviour of soil and rock when a structure is imposed and determining the safe loading for the soil
- studying architectural and engineering drawings and specifications to estimate total costs, and preparing detailed cost plans and estimates as tools to assist in budgetary control
- monitoring changes to designs, assessing effects on cost, and measuring, valuing and negotiating variations to designs
- analysing structural systems for both static and dynamic loads
- designing structures to ensure they do not collapse, bend, twist or vibrate in undesirable ways
- assessing present and future travel flow patterns taking into account population increase and needs change
- designing the physical aspects of transportation systems such as highways, railroads, urban transit, air transportation, logistical supply systems and their terminals

Occupations:

- 253211 Civil Engineer
- 233212 Geotechnical Engineer
- 233213 Quantity Surveyor
- 233214 Structural Engineer
- 253215 Transport Engineer

UNIT GROUP 2332 CIVIL ENGINEERING PROFESSIONALS *continued***233211 CIVIL ENGINEER**

Plans, designs, organises and oversees the construction and operation of dams, bridges, pipelines, gas and water supply schemes, sewerage systems, airports and other civil engineering projects. Registration or licensing may be required.

Skill Level: 1

Specialisations:

Airfield Engineer Officer (Air Force)

Hydraulics Engineer

233212 GEOTECHNICAL ENGINEER

Plans, directs and conducts survey work to analyse the likely behaviour of soil and rock when placed under pressure by proposed structures, and designs above and below ground foundations. Registration or licensing may be required.

Skill Level: 1

233213 QUANTITY SURVEYOR

Alternative Titles:

Building Economist

Construction Economist

Estimates and monitors construction costs from the project feasibility stage, through tender preparation, to the construction period and beyond. Registration or licensing is required.

Skill Level: 1

233214 STRUCTURAL ENGINEER

Analyses the static properties of all types of structures, tests the behaviour and durability of materials used in their construction, and designs and supervises the construction of all types of structures. Registration or licensing may be required.

Skill Level: 1

233215 TRANSPORT ENGINEER

Plans and develops transport systems to improve infrastructure efficiency and the cost effectiveness of moving people and freight. Registration or licensing may be required.

Skill Level: 1

Specialisation:

Roading Engineer (NZ)

UNIT GROUP 2333 ELECTRICAL ENGINEERS

ELECTRICAL ENGINEERS design, develop and supervise the manufacture, installation, operation and maintenance of equipment, machines and systems for the generation, distribution, utilisation and control of electric power.

Indicative Skill Level

In Australia and New Zealand:

Most occupations in this unit group have a level of skill commensurate with a bachelor degree or higher qualification. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification (ANZSCO Skill Level 1).

Registration or licensing may be required.

Tasks include:

- planning and designing power stations and power generation equipment
- determining the type and arrangement of circuits, transformers, circuit-breakers, transmission lines and other equipment
- developing products such as electric motors, components, equipment and appliances
- interpreting specifications, drawings, standards and regulations relating to electric power equipment and use
- organising and managing resources used in the supply of electrical components, machines, appliances and equipment
- establishing delivery and installation schedules for machines, switchgear, cables and fittings
- supervising the operation and maintenance of power stations, transmission and distribution systems and industrial plants
- designing and installing control and signalling equipment for road, rail and air traffic
- may specialise in research in areas such as power generation and transmission systems, transformers, switchgear and electric motors, telemetry and control systems

Occupation:

233311 Electrical Engineer

233311 ELECTRICAL ENGINEER

Designs, develops and supervises the manufacture, installation, operation and maintenance of equipment, machines and systems for the generation, distribution, utilisation and control of electric power. Registration or licensing may be required.

*Skill Level: 1**Specialisations:*

Electrical Design Engineer
 Railway Signalling Engineer
 Signalling and Communications Engineer

UNIT GROUP 2334 ELECTRONICS ENGINEERS

ELECTRONICS ENGINEERS design, develop, adapt, install, test and maintain electronic components, circuits and systems used for computer systems, communication systems, entertainment, transport and other industrial applications.

Indicative Skill Level

In Australia and New Zealand:

Most occupations in this unit group have a level of skill commensurate with a bachelor degree or higher qualification. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification (ANZSCO Skill Level 1).

Registration or licensing may be required.

Tasks include:

- designing electronic components, circuits and systems used for computer, communication and control systems, and other industrial applications
- designing software, especially embedded software, to be used within such systems
- developing apparatus and procedures to test electronic components, circuits and systems
- supervising installation and commissioning of computer, communication and control systems, and ensuring proper control and protection methods
- establishing and monitoring performance and safety standards and procedures for operation, modification, maintenance and repair of such systems
- designing communications beacons based on wired, optical fibre and wireless communication media
- analysing communications traffic and level of service, and determining the type of installation, location, layout and transmission medium for communication systems
- designing and developing signal processing algorithms and implementing these through appropriate choice of hardware and software

Occupation:

233411 Electronics Engineer

233411 ELECTRONICS ENGINEER

Designs, develops, adapts, installs, tests and maintains electronic components, circuits and systems used for computer systems, communication systems, entertainment, transport and other industrial applications.

Registration or licensing may be required.

*Skill Level: 1**Specialisation:*

Communications Engineer (Army)

UNIT GROUP 2335 INDUSTRIAL, MECHANICAL AND PRODUCTION ENGINEERS

INDUSTRIAL, MECHANICAL AND PRODUCTION ENGINEERS design, organise and oversee the construction, operation and maintenance of mechanical and process plant and installations, establish programs for the coordination of manufacturing activities, and ensure usage of resources is cost effective.

Indicative Skill Level

In Australia and New Zealand:

Most occupations in this unit group have a level of skill commensurate with a bachelor degree or higher qualification. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification (ANZSCO Skill Level 1).

Registration or licensing may be required.

Tasks include:

- studying functional statements, organisational charts and project information to determine functions and responsibilities of workers and work units and to identify areas of duplication
- establishing work measurement programs and analysing work samples to develop standards for labour utilisation
- analysing workforce utilisation, facility layout, operational data and production schedules and costs to determine optimum worker and equipment efficiencies
- designing mechanical equipment, machines, components, products for manufacture, and plant and systems for construction
- developing specifications for manufacture, and determining materials, equipment, piping, material flow, capacities and layout of plant and systems
- organising and managing project labour and the delivery of materials, plant and equipment
- establishing standards and policies for installation, modification, quality control, testing, inspection and maintenance according to engineering principles and safety regulations
- inspecting plant to ensure optimum performance is maintained
- directing the maintenance of plant buildings and equipment, and coordinating the requirements for new designs, surveys and maintenance schedules

Occupations:

- 233511 Industrial Engineer
- 233512 Mechanical Engineer
- 233513 Production or Plant Engineer

233511 INDUSTRIAL ENGINEER

Investigates and reviews the utilisation of personnel, facilities, equipment and materials, current operational processes and established practices, to recommend improvement in the efficiency of operations in a variety of commercial, industrial and production environments. Registration or licensing may be required.

*Skill Level: 1**Specialisation:*

Process Engineer (Industrial)

UNIT GROUP 2335 INDUSTRIAL, MECHANICAL AND PRODUCTION ENGINEERS

continued

233512 MECHANICAL ENGINEER

Plans, designs, organises and oversees the assembly, erection, operation and maintenance of mechanical and process plant and installations. Registration or licensing may be required.

Skill Level: 1

Specialisations:

 Airconditioning Engineer

 Heating and Ventilation Engineer

233513 PRODUCTION OR PLANT ENGINEER

Plans, directs and coordinates the design, construction, modification, continued performance and maintenance of equipment and machines in industrial plants, and the management and planning of manufacturing activities. Registration or licensing may be required.

Skill Level: 1

Specialisation:

 Automation and Control Engineer

UNIT GROUP 2336 MINING ENGINEERS

MINING ENGINEERS plan and direct the engineering aspects of locating and extracting minerals, petroleum and natural gas from the earth.

Indicative Skill Level

In Australia and New Zealand:

Most occupations in this unit group have a level of skill commensurate with a bachelor degree or higher qualification. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification (ANZSCO Skill Level 1).

Registration or licensing may be required.

Tasks include:

- conducting preliminary surveys of mineral, petroleum and natural gas deposits with prospectors, Geologists, Geophysicists, other mineral scientists and other engineers to determine the resources present, the feasibility of extracting the reserves, and the design and development of the extraction process
- preparing operation and project cost estimates and production schedules, and reporting progress, production and costs compared to budget.
- determining the most suitable methods of ore extraction taking account of such factors as depth of overburden, and attitude and physical characteristics of deposits and surrounding strata
- preparing plans for tunnels and chambers, location and construction of mine shafts, layout of mine development and the application of appropriate mining techniques, often using computer modelling
- assessing the natural, technical, financial and safety risks associated with the phases of the project development, construction and operations
- determining the safety of processes, order of extraction and safety of mine walls, evaluating the risk of slippage and advising on the prevention of slippage and rock falls
- planning and coordinating the utilisation of labour and equipment consistent with efficiency targets, statutes, safety guidelines and environmental conditions
- planning and conducting research and providing advice on engineering operations for the exploration, location and extraction of petroleum and natural gas
- determining location for drilling
- deciding on types of derrick and equipment including seabed platforms
- devising methods of controlling the flow of oil and gas from wells

Occupations:

- 233611 Mining Engineer (excluding Petroleum)
- 233612 Petroleum Engineer

233611 MINING ENGINEER (EXCLUDING PETROLEUM)

Plans and directs the engineering aspects of locating and extracting minerals from the earth. Registration or licensing may be required.

Skill Level: 1

Specialisation:

Process Engineer (Mining)

MAJOR GROUP 2 *continued*

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UNIT GROUP 2336 MINING ENGINEERS *continued*

233612 PETROLEUM ENGINEER

Plans and directs the engineering aspects of locating and extracting petroleum or natural gas from the earth.
Registration or licensing may be required.

Skill Level: 1

Specialisations:

Mud Engineer

Petrophysical Engineer

UNIT GROUP 2339 OTHER ENGINEERING PROFESSIONALS

This unit group covers Engineering Professionals not elsewhere classified.

It includes Aeronautical Engineers, Agricultural Engineers, Biomedical Engineers, Engineering Technologists, Environmental Engineers and Naval Architects (Aus) / Marine Designers (NZ).

Indicative Skill Level

In Australia and New Zealand:

Most occupations in this unit group have a level of skill commensurate with a bachelor degree or higher qualification. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification (ANZSCO Skill Level 1).

Registration or licensing may be required.

Occupations:

- 23911 Aeronautical Engineer
- 23912 Agricultural Engineer
- 23915 Biomedical Engineer
- 23914 Engineering Technologist
- 23915 Environmental Engineer
- 23916 Naval Architect (Aus) / Marine Designer (NZ)
- 23999 Engineering Professionals nec

233911 AERONAUTICAL ENGINEER

Performs and supervises engineering work concerned with the design, development, manufacture, maintenance and modification of aircraft for flight. Registration or licensing may be required.

Skill Level: 1

Specialisations:

- Aeronautical Engineering Officer (Navy)
- Aerospace Engineer
- Aerospace Engineer Officer - Aeronautical (Air Force)
- Aerospace Engineer Officer - Armament (Air Force)
- Aerospace Engineer Officer - Electronics (Air Force)
- Atomics Systems Engineer
- Weapons Aeronautical Engineering Officer (Navy)

233912 AGRICULTURAL ENGINEER

Alternative Title:

- Natural Resources Engineer

Performs and supervises engineering work related to the use and development of agricultural land, buildings, machines and equipment. Registration or licensing may be required.

Skill Level: 1

UNIT GROUP 2339 OTHER ENGINEERING PROFESSIONALS *continued***233913 BIOMEDICAL ENGINEER**

Applies knowledge and methodology of physics, engineering, mathematics, computing, physical chemistry and materials science to problems in biology and the treatment and prevention of human disease. Registration or licensing may be required.

Skill Level: 1

Specialisations:

- Biomechanical Engineer
- Clinical Engineer
- Medical Engineer

233914 ENGINEERING TECHNOLOGIST

Analyses and modifies new and existing engineering technologies and applies them in the testing and implementation of engineering projects. Registration or licensing may be required.

Skill Level: 1

Specialisations:

- Aeronautical Engineering Technologist
- Agricultural Engineering Technologist
- Biomedical Engineering Technologist
- Chemical Engineering Technologist
- Industrial Engineering Technologist
- Mining Engineering Technologist

233915 ENVIRONMENTAL ENGINEER

Assesses the impact on air, water, soil and noise levels in the vicinity of engineering projects, plans and designs equipment and processes for the treatment and safe disposal of waste material, and assesses what may cause problems for the environment in the long-term. Registration or licensing is required.

Skill Level: 1

233916 NAVAL ARCHITECT (AUS) / MARINE DESIGNER (NZ)

Designs and oversees the construction and repair of marine craft and floating structures. Registration or licensing may be required.

Skill Level: 1

233999 ENGINEERING PROFESSIONALS NEC

This occupation group covers Engineering Professionals not elsewhere classified. Registration or licensing may be required.

Skill Level: 1

Occupations in this group include:

- Mechatronics Engineer
- Product Design Engineer

UNIT GROUP 2633 TELECOMMUNICATIONS ENGINEERING PROFESSIONALS

TELECOMMUNICATIONS ENGINEERING PROFESSIONALS design, construct, install, service and support telecommunications equipment, systems and facilities.

Indicative Skill Level

In Australia and New Zealand:

Most occupations in this unit group have a level of skill commensurate with a bachelor degree or higher qualification. At least five years of relevant experience and/or relevant vendor certification may substitute for the formal qualification. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification (ANZSCO Skill Level 1).

Tasks include:

- planning, designing, building, configuring and commissioning telecommunications devices, networks and systems, such as voice, radio, two-way, data, microwave, satellite and digital data systems, and ensuring telecommunications systems interconnect with equipment from different manufacturers, service providers and users
- compiling engineering project proposals to define goals, identify scope, background and need, and ascertain cost of equipment, parts and services
- evaluating and procuring new products and services from vendors
- ensuring compliance with laws, regulations, policies and procedures in the provision of telecommunications systems
- selecting and developing new telecommunications sites by locating sites, filing documents, drawing up documents for approval, drafting construction drawings and following through to approval
- determining appropriate configurations of telecommunications hardware and software, ensuring desired performance of telecommunications equipment
- preparing and interpreting specifications, drawings and regulations for the use of telecommunications equipment
- determining the type and arrangement of circuits, transformers, circuit-breakers, transmission lines and equipment
- identifying and analysing problems and needs of existing telecommunications systems, such as interference, intelligibility and clarity, to determine the most appropriate means of reducing, eliminating and avoiding current and future problems and improve communications
- monitoring telecommunications systems to assess need for updates, upgrades, enhancements, preventive maintenance and new systems
- assessing performance levels of system hardware and software to project future needs, and developing short- and long-term plans for updating equipment, adding capabilities, enhancing existing systems and providing improved telecommunications

Occupations:

263511 Telecommunications Engineer

263512 Telecommunications Network Engineer

263311 TELECOMMUNICATIONS ENGINEER

Designs and develops telecommunications systems, devices and products.

*Skill Level: 1**Specialisation:*

Signals Corps Officer (Army) (Aus) / Signals Officer (Army) (NZ)

MAJOR GROUP 2 *continued*

UNIT GROUP 2633 TELECOMMUNICATIONS ENGINEERING PROFESSIONALS

continued

263312 TELECOMMUNICATIONS NETWORK ENGINEER

Alternative Titles:

- Communications Consultant
- Communications Specialist (ICT)
- Telecommunications Consultant
- Telecommunications Specialist

Plans, designs, and monitors complex telecommunications networks and associated broadcasting equipment.

Skill Level: 1

SUB-MAJOR GROUP 31 ENGINEERING, ICT AND SCIENCE TECHNICIANS

ENGINEERING, ICT AND SCIENCE TECHNICIANS perform tests and experiments, and provide technical support to Professionals engaged in research, design and development in the areas of agriculture, medicine, science, building, engineering, ICT and telecommunications.

Indicative Skill Level

Most occupations in this sub-major group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

MQF Associate Degree, Advanced Diploma or Diploma (ANZSCO Skill Level 2)

In New Zealand:

NZ Register Diploma (ANZSCO Skill Level 2)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks include:

- performing scientific tests, experiments and computations and collating and analysing the results
- inspecting animals, plants and agricultural produce to ensure compliance with government and industry standards
- developing, operating and maintaining instruments and equipment used in clinical diagnosis and experimental research
- preparing, interpreting, inspecting and revising drawings, plans, diagrams, designs, maps and charts
- installing, testing, repairing and modifying electrical, electronic and mechanical equipment
- estimating quantities and costs of materials
- providing technical support for telecommunications networks, and to users of computer hardware and software

Occupations in this sub-major group are classified into the following minor groups:

- 311 Agricultural, Medical and Science Technicians
- 312 Building and Engineering Technicians
- 313 ICT and Telecommunications Technicians

MINOR GROUP 312 BUILDING AND ENGINEERING TECHNICIANS

BUILDING AND ENGINEERING TECHNICIANS perform tests and provide technical support to Construction Managers, Architects and Engineering Professionals in research, design, construction, operation and maintenance of equipment, distribution systems and installations, and resource estimation and site inspection.

Indicative Skill Level

Most occupations in this minor group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

MQF Associate Degree, Advanced Diploma or Diploma (ANZSCO Skill Level 2)

In New Zealand:

NZ Register Diploma (ANZSCO Skill Level 2)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks include:

- preparing, interpreting, inspecting and revising drawings, plans, diagrams, designs, maps and charts
- performing complex computations and field and laboratory tests, and recording the results
- installing, testing, repairing and modifying electrical, electronic and mechanical equipment
- estimating quantities and costs of materials
- inspecting buildings, plumbing work, machines, equipment, working conditions and public places to ensure compliance with relevant laws, standards and regulations
- planning, scheduling, coordinating and monitoring maintenance of plant equipment
- testing materials
- overseeing the safety of mining operations and supervising Miners

Occupations in this minor group are classified into the following unit groups:

- 3121 Architectural, Building and Surveying Technicians
- 3122 Civil Engineering Draftspersons and Technicians
- 3123 Electrical Engineering Draftspersons and Technicians
- 3124 Electronic Engineering Draftspersons and Technicians
- 3125 Mechanical Engineering Draftspersons and Technicians
- 3126 Safety Inspectors
- 3129 Other Building and Engineering Technicians

**UNIT GROUP 3121 ARCHITECTURAL, BUILDING AND SURVEYING
TECHNICIANS**

ARCHITECTURAL, BUILDING AND SURVEYING TECHNICIANS perform technical functions to assist Construction Managers, Architects and Surveyors by supervising and inspecting construction sites, estimating time, costs and resources, inspecting plumbing work, and collecting and evaluating survey data and preparing maps and plans.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Associate Degree, Advanced Diploma or Diploma (ANZSCO Skill Level 2)

In New Zealand:

NZ Register Diploma (ANZSCO Skill Level 2)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Registration or licensing may be required.

Tasks include:

- assisting Construction Managers, Architects and Surveyors in planning and organisation
- interpreting plans, regulations and codes of practice
- preparing preliminary sketches, working drawings and specifications
- preparing, editing and revising plans, maps, charts and drawings
- coordinating works programs
- inspecting work and materials for compliance with specifications, regulations and standards
- calculating costs and estimating time scales
- collecting data using surveying instruments and photogrammetric equipment
- performing routine computations and plotting preliminary data

Occupations:

- 312111 Architectural Draftsperson
- 312112 Building Associate
- 312115 Building Inspector
- 312114 Construction Estimator
- 312115 Plumbing Inspector
- 312116 Surveying and Cartographic Technician

312111 ARCHITECTURAL DRAFTSPERSON

Alternative Title:

Architectural Associate

Completes Architects' concepts by preparing drawings and plans, and liaising with builders and contractors.

Skill Level 2

Specialisation:

Building Drafting Officer

**UNIT GROUP 3121 ARCHITECTURAL, BUILDING AND SURVEYING
TECHNICIANS** *continued*

312112 BUILDING ASSOCIATE

Supervises construction sites, and organises and coordinates the material and human resources required.
Registration or licensing may be required.

Skill Level 2

Specialisations:

Building Construction Supervisor
Clerk of Works

312113 BUILDING INSPECTOR

Alternative Titles:

Building Certifier
Building Surveyor

Inspects buildings to ensure compliance with laws and regulations and advises on building requirements.
Registration or licensing may be required.

Skill Level 2

Specialisation:

Electrical Installation Inspector

312114 CONSTRUCTION ESTIMATOR

Alternative Title:

Building Estimator

Prepares and delivers estimates and cost plans for construction projects up to the tender settlement stage.

Skill Level 2

312115 PLUMBING INSPECTOR

Inspects plumbing work to ensure compliance with relevant standards and regulations. Registration or licensing is required.

Skill Level 2

Specialisations:

Drainage Inspector
Gas Plumbing Inspector
Sanitary Plumbing and Water Supply Inspector

UNIT GROUP 3121 ARCHITECTURAL, BUILDING AND SURVEYING
TECHNICIANS *continued*

312116 SURVEYING OR CARTOGRAPHIC TECHNICIAN

Alternative Title:

Surveying Technologist

Collects, records and evaluates survey data and prepares maps, charts and plans in support of Surveyors or Cartographers. Registration or licensing may be required.

Skill Level: 2

Specialisations:

Aerial Survey Technician

Engineering Survey Drafting Technician

Photogrammetrist

Topographic Drafting Officer

UNIT GROUP 3122 CIVIL ENGINEERING DRAFTSPERSONS AND TECHNICIANS

CIVIL ENGINEERING DRAFTSPERSONS AND TECHNICIANS assist in civil engineering research, design, construction, operations and maintenance.

Indicative Skill Level:

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Associate Degree, Advanced Diploma or Diploma (ANZSCO Skill Level 2)

In New Zealand:

NZ Register Diploma (ANZSCO Skill Level 2)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Registration or licensing may be required.

Tasks include:

- preparing sketches, charts, tabulations, plans and designs for civil engineering works such as drainage, water supply, sewerage reticulation systems, roads, airports, dams, bridges and other structures
- performing and directing fieldwork and laboratory testing
- interpreting work assignment instructions, applying appropriate procedures and selecting equipment
- collecting and analysing data, and carrying out computations
- estimating material costs and ensuring finished works are within specifications, regulations and contract provisions
- inspecting civil engineering works, and organising and supervising maintenance and repair work
- conducting field and laboratory tests of construction materials and soils, and collecting data for traffic surveys

Occupations:

312211 Civil Engineering Draftsperson

312212 Civil Engineering Technician

312211 CIVIL ENGINEERING DRAFTSPERSON

Prepares detailed drawings and plans for civil engineering work in support of Civil Engineering Professionals and Engineering Technologists. Registration or licensing may be required.

Skill Level 2

Specialisations:

Civil Engineering Design Draftsperson

Planning Engineering Draftsperson

Road Design Draftsperson

Sewage Reticulation Drafting Officer

Structural Engineering Drafting Officer

UNIT GROUP 3122 CIVIL ENGINEERING DRAFTSPERSONS AND TECHNICIANS

continued

312212 CIVIL ENGINEERING TECHNICIAN

Conducts tests of construction materials, prepares sketches and tabulations, and assists in estimating costs in support of Civil Engineering Professionals and Engineering Technologists. Registration or licensing may be required.

Skill Level 2

Specializations:

- Civil Engineering Assistant
- Civil Laboratory Technician
- Geotechnical Laboratory Technician

UNIT GROUP 3123 ELECTRICAL ENGINEERING DRAFTSPERSONS AND TECHNICIANS

ELECTRICAL ENGINEERING DRAFTSPERSONS AND TECHNICIANS assist in electrical engineering research, design, manufacture, assembly, construction, operation and maintenance of equipment, facilities and distribution systems.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Associate Degree, Advanced Diploma or Diploma (ANZSCO Skill level 2)

In New Zealand:

NZ Register Diploma (ANZSCO Skill Level 2)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Registration or licensing may be required.

Tasks include

- preparing drawings, plans and diagrams of electrical installations and circuitry
- assisting Electrical Engineers and Engineering Technologists in design and layout of electrical installations and circuitry on substations, switchgear, cabling systems and motor control systems
- collecting data, performing tests and complex calculations, graphing results, and preparing charts and tabulations
- estimating materials costs and quantities
- inspecting designs and finished products for compliance with specifications and regulations
- assembling, installing, testing, calibrating, modifying and repairing electrical equipment and installations to conform with regulations and safety requirements
- undertaking electrical workshop functions such as installing assemblies for protection relays, metering and indicating devices
- assisting with research and experimentation programs

Occupations:

312511 Electrical Engineering Draftsperson

312512 Electrical Engineering Technician

312311 ELECTRICAL ENGINEERING DRAFTSPERSON

Prepares detailed drawings and plans of electrical installations and circuitry in support of Electrical Engineers and Engineering Technologists. Registration or licensing may be required.

Skill Level: 2

Specialisations:

Electrical Engineering Design Draftsperson

Electrical Engineering Drafting Officer

Relays Draftsperson

Substation Design Draftsperson

**UNIT GROUP 3123 ELECTRICAL ENGINEERING DRAFTSPERSONS AND
TECHNICIANS** *continued*

312312 ELECTRICAL ENGINEERING TECHNICIAN

Alternative Title:

Electrical Engineering Technical Officer

Conducts tests of electrical systems, prepares charts and tabulations, and assists in estimating costs in support of Electrical Engineers and Engineering Technologists. Registration or licensing may be required.

Skill Level 2

Specialisations:

Electrical Engineering Detail Draftsperson

Electrical Engineering Laboratory Technician

Electrical Instrument Technician

UNIT GROUP 3124 ELECTRONIC ENGINEERING DRAFTSPERSONS AND TECHNICIANS

ELECTRONIC ENGINEERING DRAFTSPERSONS AND TECHNICIANS assist in electronic engineering research, design, manufacture, assembly, construction, operation and maintenance of equipment, facilities and distribution systems.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Associate Degree, Advanced Diploma or Diploma (ANZSCO Skill level 2)

In New Zealand:

NZ Register Diploma (ANZSCO Skill Level 2)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Registration or licensing may be required.

Tasks include

- preparing drawings, plans and diagrams for electronic engineering work
- developing, constructing and testing electronic equipment and associated circuitry in accordance with technical manuals and instructions of Electronics Engineers and Engineering Technologists
- performing tests, graphing results, preparing charts and tabulations
- estimating material costs and quantities
- evaluating performance of equipment
- inspecting designs and finished products for compliance with specifications, drawings, contracts and regulations
- installing, testing, repairing and modifying electronic equipment

Occupations:

312411 Electronic Engineering Draftsperson

312412 Electronic Engineering Technician

312411 ELECTRONIC ENGINEERING DRAFTSPERSON

Prepares detailed drawings and plans of electronic engineering work in support of Electronics Engineers and Engineering Technologists. Registration or licensing may be required.

Skill Level: 2

Specialisations:

Communications and Data Systems Drafting Officer

Control Systems Drafting Officer

Electronics Detail Draftsperson

**UNIT GROUP 3124 ELECTRONIC ENGINEERING DRAFTSPERSONS AND
TECHNICIANS** *continued*

312412 ELECTRONIC ENGINEERING TECHNICIAN

Conducts tests of electronic systems, collects and analyses data, and assembles circuitry in support of Electronics Engineers and Engineering Technologists. Registration or licensing may be required.

Skill Level 2

Specialisations:

- Aircraft Electronics Technical Officer
- Communications Engineering Technical Officer
- Communications Engineering Technician
- Computer Numeric Control Technical Officer
- Digital Controls Technical Officer
- Flight Surveyor
- Printed Circuit Board Designer
- Process Control Technician
- Telemetry Technician

UNIT GROUP 3125 MECHANICAL ENGINEERING DRAFTSPERSONS AND TECHNICIANS

MECHANICAL ENGINEERING DRAFTSPERSONS AND TECHNICIANS assist in mechanical engineering research, design, manufacture, construction, operation and maintenance of machines, manufacturing equipment, mechanical installations and facilities.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Associate Degree, Advanced Diploma or Diploma (ANZSCO Skill level 2)

In New Zealand:

NZ Register Diploma (ANZSCO Skill Level 2)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks include:

- preparing drawings, plans and designs for mechanical engineering work under the direction of Mechanical Engineers and Engineering Technologists
- assisting Mechanical Engineers and Engineering Technologists in the design of mechanical equipment and plant
- selecting tools and equipment
- assembling and installing new and modified mechanical assemblies, components, machine tools and controls, and hydraulic power systems
- estimating material costs and quantities, and machine requirements
- performing and directing field and laboratory tests
- collecting and analysing data, carrying out complex computations and preparing diagrams
- organising and supervising inspection and maintenance of machines and plant
- ensuring that designs and finished work are within specifications, regulations and contract provisions

Occupations:

- 312511 Mechanical Engineering Draftsperson
- 312512 Mechanical Engineering Technician

312511 MECHANICAL ENGINEERING DRAFTSPERSON

Prepares detailed drawings and plans of mechanical engineering work in support of Mechanical Engineers and Engineering Technologists.

Skill Level 2

Specialisations:

- Airconditioning Drafting Officer
- Heating and Ventilating Technical Officer
- Tool Design Draftsperson
- Tool Designer

**UNIT GROUP 3125 MECHANICAL ENGINEERING DRAFTSPERSONS AND
TECHNICIANS** *continued*

312512 MECHANICAL ENGINEERING TECHNICIAN

Conducts tests of mechanical systems, collects and analyses data, and assembles and installs mechanical assemblies in support of Mechanical Engineers and Engineering Technologists.

Skill Level 2

Specialisations:

- Boiler Testing Technician
- Hydraulic Controls Technician
- Mechanical Laboratory Technician
- Pipe Testing Technician

UNIT GROUP 3126 SAFETY INSPECTORS

SAFETY INSPECTORS inspect machines, equipment, working conditions and public places to ensure compliance with government and industry standards and regulations, in relation to occupational health and safety.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

MQF Associate Degree, Advanced Diploma or Diploma (ANZSCO Skill Level 2)

In New Zealand:

NZ Register Diploma (ANZSCO Skill Level 2)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Registration or licensing may be required.

Tasks include:

- examining equipment specifications, and inspecting and testing machines, equipment and clothing to ensure compliance with safety standards and serviceability
- inspecting factories and other work sites to ensure compliance with government and industry standards and regulations
- observing workers to ensure protective devices are being utilised according to regulations and that combustible and other hazardous materials are used and stored in accordance with approved procedures
- conducting tests in work areas to detect toxic fumes, explosive gas-air mixtures and other work hazards
- ensuring fire prevention equipment and other safety supplies, such as first aid kits, stretchers and blankets, conform to standards
- assisting in conducting safety meetings and campaigns, and organising training in general safety principles in keeping with regulations
- advising organisations on ways to comply with occupational health and safety legislative requirements
- investigating incidents and fatalities, to determine causes and to collect evidence of non-compliance with occupational health and safety legislation

Occupation:

312611 Safety Inspector

312611 SAFETY INSPECTOR

Inspects machines, equipment, working conditions and public places to ensure compliance with government and industry standards and regulations, in relation to occupational health and safety. Registration or licensing may be required.

Skill Level: 2

Specialisations:

- Boilers and Pressure Vessels Inspector
- Gas Examiner
- Lifts and Cranes Inspector
- Mines Inspector
- Occupational Health and Safety Inspector

UNIT GROUP 3129 OTHER BUILDING AND ENGINEERING TECHNICIANS

This unit group covers Building and Engineering Technicians not elsewhere classified.

It includes Maintenance Planners, Metallurgical or Materials Technicians, and Mine Deputies.

Indicative Skill Level:

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Associate Degree, Advanced Diploma or Diploma (ANZSCO Skill Level 2)

In New Zealand:

NZ Register Diploma (ANZSCO Skill Level 2)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Registration or licensing may be required.

Occupations:

- 312911 Maintenance Planner
- 312912 Metallurgical or Materials Technician
- 312915 Mine Deputy
- 312999 Building and Engineering Technicians nec

312911 MAINTENANCE PLANNER

Alternative Titles:

- Maintenance Scheduler
- Shutdown Coordinator
- Shutdown Planner

Develops maintenance planning strategies, and schedules, coordinates and monitors the maintenance of all plant equipment.

Skill Level: 2

UNIT GROUP 3129 OTHER BUILDING AND ENGINEERING TECHNICIANS*continued***312912 METALLURGICAL OR MATERIALS TECHNICIAN**

Tests materials as part of mineral and metal processing and refining, or for research into metals, ceramics, polymers and other materials in support of Metallurgists and Materials Engineers. Registration or licensing may be required.

Skill Level 2

Specialisations:

- Dye Penetrant Testing Technician
- Heat Treatment Technician
- Magnetic Testing Technician
- Metallurgy Laboratory Technician
- Non-destructive Testing Technician
- Petroleum Products Laboratory Technician
- Petroleum Refinery Laboratory Technician
- Pressure Testing Technician
- Ultrasound Technician

312913 MINE DEPUTY

Oversees the safety of mining operations and supervises Miners. Registration or licensing is required.

Skill Level 2

Specialisations:

- Mining Technicians
- Open Cut Examiner

312999 BUILDING AND ENGINEERING TECHNICIANS NEC

This occupation group covers Building and Engineering Technicians not elsewhere classified. Registration or licensing may be required.

Skill Level 2

Occupations in this group include:

- Aircraft Detail Draftsperson
- Aircraft Systems Technician (Air Force)
- Airframe Technical Officer
- Avionics Systems Technician (Air Force)
- Biomedical Engineering Associate
- Mining Detail Draftsperson
- Shipbuilding Draftsperson

MINOR GROUP 313 ICT AND TELECOMMUNICATIONS TECHNICIANS

ICT AND TELECOMMUNICATIONS TECHNICIANS provide support to the development and maintenance of computer infrastructure, web technology and telecommunications networks, and the diagnosis and resolution of technical problems.

Indicative Skill Level

Most occupations in this minor group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

MQF Associate Degree, Advanced Diploma or Diploma (ANZSCO Skill Level 2)

In New Zealand:

NZ Register Diploma (ANZSCO Skill Level 2)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks include:

- determining software and hardware requirements to provide solutions for problems
- responding to inquiries about software and hardware problems
- repairing and replacing peripheral equipment such as terminals, printers and modems
- installing and downloading appropriate software, and adapting existing programs to meet users' requirements
- implementing computer networks, and ensuring efficient use of applications and equipment
- designing and maintaining web sites
- installing and maintaining microwave, telemetry, multiplexing, satellite and other radio and electromagnetic wave communication systems
- configuring and integrating network and telecommunications technology with computer software, hardware, peripherals and operating systems
- planning the development of customer access telecommunications network infrastructure

Occupations in this minor group are classified into the following unit groups:

3131 ICT Support Technicians

3132 Telecommunications Technical Specialists

UNIT GROUP 3132 TELECOMMUNICATIONS TECHNICAL SPECIALISTS

TELECOMMUNICATIONS TECHNICAL SPECIALISTS develop, monitor and carry out technical support functions for telecommunications networks and install computer equipment, computer systems and microwave, telemetry, multiplexing, satellite and other radio and electromagnetic wave communication systems.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Associate Degree, Advanced Diploma or Diploma (ANZSCO Skill level 2)

In New Zealand:

NZ Register Diploma (ANZSCO Skill Level 2)

At least three years of relevant experience and/or relevant vendor certification may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks Include:

- installing, maintaining, repairing and diagnosing malfunctions of microwave, telemetry, multiplexing, satellite and other radio and electromagnetic wave communication systems
- configuring and integrating network and telecommunications technology with computer software, hardware, desktops, peripherals, databases and operating systems
- developing and recording logs of the details, locations and status of inventories, parts, equipment and instruments and maintaining the documentation of communication policies, procedures, guidelines and regulations, and quality standards
- providing technical advice and information, and monitoring the performance of complex telecommunications networks and equipment
- planning the development of customer access telecommunications network infrastructure
- liaising with vendors, suppliers, service providers and external resources and monitoring contractual obligations and performance delivery
- providing ongoing operational support in designing, optimising, troubleshooting, diagnosing, repairing and resolving of telecommunications network performance malfunctions, defects and faults

Occupations:

- 313211 Radiocommunications Technician
- 313212 Telecommunications Field Engineer
- 313213 Telecommunications Network Planner
- 313214 Telecommunications Technical Officer or Technologist

313211 RADIOCOMMUNICATIONS TECHNICIAN

Installs, maintains, repairs and diagnoses malfunctions of microwave, telemetry, multiplexing, satellite and other radio and electromagnetic wave communication systems.

Skill Level 2

MAJOR GROUP 3 *continued*

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UNIT GROUP 3132 TELECOMMUNICATIONS TECHNICAL SPECIALISTS *continued*

313212 TELECOMMUNICATIONS FIELD ENGINEER

Plans, designs, commissions and monitors complex telecommunications networks and associated equipment, provides technical advice and information, and identifies complex problems and initiates action to resolve them.

Skill Level 2

313213 TELECOMMUNICATIONS NETWORK PLANNER

Plans the development of customer access telecommunications network infrastructure.

Skill Level 2

313214 TELECOMMUNICATIONS TECHNICAL OFFICER OR TECHNOLOGIST

Carries out specialised design and support functions in telecommunications engineering including optimisation and performance monitoring of telecommunications networks, diagnosis and repair of faults, and the selection and installation of equipment.

Skill Level 2

SUB-MAJOR GROUP 32 AUTOMOTIVE AND ENGINEERING TRADES WORKERS

AUTOMOTIVE AND ENGINEERING TRADES WORKERS construct, repair and maintain motor vehicles and aircraft structures and systems, and cut, shape, cast, join and finish metal, metal parts, subassemblies and precision instruments.

Indicative Skill Level

Most occupations in this sub-major group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate III including at least two years of on-the-job training, or AQF Certificate IV (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 3)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks include:

- diagnosing electrical and mechanical faults in motor vehicles and aircraft
- dismantling engines and electrical systems, and removing damaged panels and interior trim
- repairing and replacing worn and defective parts
- painting repaired vehicle surfaces
- constructing, modifying, painting and upholstering prototype and specialised vehicle bodies
- marking and cutting out metal stock
- shaping stock using hand and machine tools
- shaping metal in moulds
- joining stock and components by welding, soldering, brazing, riveting, bolting, screwing and gluing
- fitting and testing components, and applying protective and decorative finishes to metal products

Occupations in this sub-major group are classified into the following minor groups:

- 321 Automotive Electricians and Mechanics
- 322 Fabrication Engineering Trades Workers
- 323 Mechanical Engineering Trades Workers
- 324 Panelbeaters, and Vehicle Body Builders, Trimmers and Painters

MINOR GROUP 321 AUTOMOTIVE ELECTRICIANS AND MECHANICS

AUTOMOTIVE ELECTRICIANS AND MECHANICS repair and maintain automotive electrical systems and motor vehicle and other internal combustion engines.

Mechanical Engineering Trades Workers are excluded from this minor group. Mechanical Engineering Trades Workers are included in Minor Group 323 Mechanical Engineering Trades Workers.

Indicative Skill Level:

Most occupations in this minor group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate III including at least two years of on-the-job training, or AQF Certificate IV (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 3)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks include:

- diagnosing electrical and mechanical faults in motor vehicles and small engines
- dismantling engines and electrical systems
- repairing and replacing worn and defective parts
- installing electrical equipment and electronic components in motor vehicles
- testing and adjusting electrical and mechanical systems and parts after repair for proper performance
- performing scheduled maintenance on motor vehicles

Occupations in this minor group are classified into the following unit groups:

- 3211 Automotive Electricians
- 3212 Motor Mechanics

UNIT GROUP 3211 AUTOMOTIVE ELECTRICIANS

AUTOMOTIVE ELECTRICIANS install, maintain and repair electrical wiring and electronic components in motor vehicles.

Indicative Skill Level:

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate III including at least two years of on-the-job training, or AQF Certificate IV (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 3)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Registration or licensing may be required.

Tasks include:

- using test equipment to locate electrical and electronic malfunctions
- dismantling and removing electrical and electronic assemblies and components
- installing electrical equipment and electronic components in motor vehicles
- connecting power-operated vehicle equipment and accessories to power supply
- adjusting engine control systems and timing
- testing and replacing defective alternators, generators, voltage regulators and starter motors
- repairing and replacing faulty ignition and electrical wiring
- replacing defective parts such as fuses, lamps and switches

Occupation:

321111 Automotive Electrician

321111 AUTOMOTIVE ELECTRICIAN

Alternative Title:

Automotive Electrical Fitter

Installs, maintains and repairs electrical wiring and electronic components in motor vehicles. Registration or licensing may be required.

Skill Level 3

UNIT GROUP 3212 MOTOR MECHANICS

MOTOR MECHANICS repair, maintain and test motor vehicle and other internal combustion engines and related mechanical components.

Motor Vehicle Parts and Accessories Fitters are excluded from this unit group. Motor Vehicle Parts and Accessories Fitters are included in Unit Group 8994 Motor Vehicle Parts and Accessories Fitters.

Indicative Skill Level:

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate III including at least two years of on-the-job training, or AQF Certificate IV (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 3)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Registration or licensing may be required.

Tasks include:

- detecting and diagnosing faults in engines and parts
- dismantling and removing engine assemblies, transmissions, steering mechanisms and other components, and checking parts
- repairing and replacing worn and defective parts and reassembling mechanical components, and referring to service manuals as needed
- performing scheduled maintenance services, such as oil changes, lubrications and engine tune-ups, to achieve smoother running of vehicles and ensure compliance with pollution regulations
- reassembling engines and parts after being repaired
- testing and adjusting mechanical parts after being repaired for proper performance
- diagnosing and testing parts with the assistance of computers
- may inspect vehicles and issue roadworthiness certificates or detail work required to achieve roadworthiness

Occupations:

- 321211 Motor Mechanic (General)
- 321212 Diesel Motor Mechanic
- 321213 Motorcycle Mechanic
- 321214 Small Engine Mechanic

UNIT GROUP 3212 MOTOR MECHANICS *continued*

321211 MOTOR MECHANIC (GENERAL)

Maintains, tests and repairs petrol engines and the mechanical parts of lightweight motor vehicles such as transmissions, suspension, steering and brakes. Registration or licensing may be required.

Skill Level: 3

Specialisations:

- Automatic Transmission Mechanic
- Automotive Airconditioning Mechanic
- Brake Mechanic
- Ground Support Equipment Fitter (Air Force)
- Marine Technician (Navy)
- Vehicle Mechanic (Army)

321212 DIESEL MOTOR MECHANIC

Maintains, tests and repairs diesel motors and the mechanical parts of trucks, buses and other heavy vehicles such as transmissions, suspension, steering and brakes. Registration or licensing may be required.

Skill Level: 3

321213 MOTORCYCLE MECHANIC

Maintains, tests and repairs the mechanical parts of motorcycles. Registration or licensing may be required.

Skill Level: 3

321214 SMALL ENGINE MECHANIC

Maintains, tests and repairs engines of chainsaws, lawn mowers, garden tractors and other equipment with small engines. Registration or licensing may be required.

Skill Level: 3

Specialisations:

- Chainsaw Mechanic
- Lawnmower Mechanic
- Outboard Motor Mechanic

MINOR GROUP 322 FABRICATION ENGINEERING TRADES WORKERS

FABRICATION ENGINEERING TRADES WORKERS cast, shape, cut, join and finish metal.

Panel Beaters and Vehicle Body Builders are excluded from this minor group. Panel Beaters and Vehicle Body Builders are included in Minor Group 324 Panelbeaters, and Vehicle Body Builders, Trimmers and Painters.

Indicative Skill Level

Most occupations in this minor group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate III including at least two years of on-the-job training, or AQF Certificate IV (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 3)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks include:

- studying blueprints, drawings and specifications to determine requirements and material, and selecting metal stock
- moulding molten metal, and applying protective and decorative finishes to metal products
- drawing and marking out patterns
- heating metal stock and shaping it using hammers
- cutting stock and moulding components to shape using hand tools, cutting torches and machine tools
- joining components by welding, soldering, brazing, riveting, bolting, screwing and gluing
- finishing products by cleaning, filing, sanding and polishing, and applying protective finishes

Occupations in this minor group are classified into the following unit groups:

- 3221 Metal Casting, Forging and Finishing Trades Workers
- 3222 Sheetmetal Trades Workers
- 3225 Structural Steel and Welding Trades Workers

UNIT GROUP 3221 METAL CASTING, FORGING AND FINISHING TRADES WORKERS

METAL CASTING, FORGING AND FINISHING TRADES WORKERS fabricate mould patterns and form sand moulds and cores for the production of metal castings, heat and hammer metal into shape, and make, repair, coat and polish metal parts and articles.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate III including at least two years of on-the-job training, or AQF Certificate IV (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 3)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks Include:

- selecting metal stock for job requirements
- heating metal in forges and furnaces and hammering, punching and cutting metal using hand tools and machine presses
- tempering and hardening finished articles by quenching in oil or water baths or by cooling gradually in air
- preparing electrolytic and silver solutions for electroforming, and applying solution to the objects to be coated
- setting and adjusting controls to regulate electric current and depositing of coating on objects
- preparing horses' hooves for shoeing, nailing horseshoes to hooves, and trimming hooves
- cutting, trimming, shaping and smoothing stock to form mould patterns
- filling boxes with sand and setting patterns in place, and pouring molten metal into moulds
- applying refractory paint and positioning cores in moulds
- finishing metal and articles by polishing and buffing and applying shellac, lacquer, paint and other finishes

Occupations:

- 322111 Blacksmith
- 322112 Electroplater
- 322115 Farrier
- 322114 Metal Casting Trades Worker
- 322115 Metal Polisher

322111 BLACKSMITH

Shapes bars, rods and blocks of metal by heating and hammering to produce or repair metal articles.

Skill Level: 3

Specialisations:

- Hammer Smith
- Spring Maker
- Tool Smith

**UNIT GROUP 3221 METAL CASTING, FORGING AND FINISHING TRADES
WORKERS** *continued*

322112 ELECTROPLATER

Controls plating processes and maintains solutions used to coat metal articles and other parts with non-ferrous metals.

Skill Level 5

Specialisations:

Anodiser

Electroformer

322113 FARRIER

Inspects, trims and shapes horses' hooves, and forms, fits and nails horseshoes.

Skill Level 5

322114 METAL CASTING TRADES WORKER

Forms sand moulds and cores for the production of metal castings.

Skill Level 5

Specialisations:

Coremaker

Metal Moulder

322115 METAL POLISHER

Polishes metal to impart smooth, reflective and other finishes.

Skill Level 5

UNIT GROUP 3222 SHEETMETAL TRADES WORKERS

SHEETMETAL TRADES WORKERS mark out, shape, form and join sheetmetal and other materials to make products and components.

Indicative Skill Level:

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate III including at least two years of on-the-job training, or AQF Certificate IV (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 3)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks include:

- studying blueprints, drawings and specifications to determine job, material and equipment requirements
- selecting metal stock, such as stainless steel, galvanised iron, mild steel, aluminium and copper, and checking sizes, gauges and other dimensions of metal stock against specifications
- marking out metal stock with reference points and lines, using templates, gauges and other measuring instruments
- cutting metal stock along guidelines using hand and power shears, guillotines and drills
- shaping and forming cut metal stock into products using folding and bending machines, rollers, presses and hammers
- fitting and assembling components into final products by welding, riveting, soldering, brazing and otherwise joining
- finishing products by polishing, filing, sanding and cleaning assembled products
- may repair damaged sheetmetal products and components
- may specialise in fabrication, or on-site assembly and installation, of sheetmetal products
- may produce aircraft sheet metal components requiring advanced drawing and calculating skills
- may specialise in decorative copperwork

Occupation:

322211 Sheetmetal Trades Worker

322211 SHEETMETAL TRADES WORKER

Marks out, shapes, forms and joins sheetmetal and other materials to make products and components.

Skill Level: 3

Specialisations:

Metal Spinner
Sheetmetal Patternmaker

UNIT GROUP 3223 STRUCTURAL STEEL AND WELDING TRADES WORKERS

STRUCTURAL STEEL AND WELDING TRADES WORKERS cut, shape, join and repair metal components of iron and steel structures, boilers, pressure vessels and pipes, ships and other vessels.

Indicative Skill Level:

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate III including at least two years of on-the-job training, or AQF Certificate IV (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 3)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks include:

- studying blueprints, drawings and specifications to determine job requirements
- selecting, cleaning and preparing metal stock
- cutting marked-out metal sections and shapes using hand tools, flame cutting torches and metal cutting machines
- shaping and bending metal sections and pipes using hand and machine tools, and by heating and hammering
- aligning parts to be joined using hand tools and measuring instruments
- joining metal sections using various welding techniques, bolting and riveting
- examining welds for width of bead, penetration and precision
- finishing products by cleaning, polishing, filing and lathing in acidic solutions
- cleaning and smoothing welds by filing, chiselling and grinding

Occupations:

- 322311 Metal Fabricator
- 322312 Pressure Welder
- 322315 Welder (First Class) (Aus) / Welder (NZ)

322311 METAL FABRICATOR

Marks off and fabricates structural steel and other metal stock to make or repair metal products and structures such as boilers and pressure vessels.

Skill Level: 3

Specialisations:

- Boilermaker-Welder
- Brass Finisher
- Metal Fabricator-Welder
- Metal Template Maker
- Structural Steel Trades Worker

UNIT GROUP 3223 STRUCTURAL STEEL AND WELDING TRADES WORKERS

continued

322312 PRESSURE WELDER

Assembles, welds and repairs pressure vessels and pipes to relevant standards.

Skill Level 5

322313 WELDER (FIRST CLASS) (AUS) / WELDER (NZ)

Fabricates and repairs metal products using various welding techniques.

Skill Level 5

Specialisation:

Special Class Welder

MINOR GROUP 323 MECHANICAL ENGINEERING TRADES WORKERS

MECHANICAL ENGINEERING TRADES WORKERS machine and prepare aircraft systems, metal parts, subassemblies and precision instruments.

Motor Mechanics are excluded from this minor group. Motor Mechanics are included in Minor Group 321 Automotive Electricians and Mechanics.

Indicative Skill Level:

Most occupations in this minor group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate III including at least two years of on-the-job training, or AQF Certificate IV (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 3)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks include:

- turning metal stock and castings to fine tolerances using machine tools to press, cut, grind, plane, bore and drill metal
- checking fabricated and assembled metal parts for fit
- fitting parts into machines using hand tools
- disassembling, repairing and replacing defective parts, and testing and reassembling aircraft components and systems and precision instruments
- assembling parts and subassemblies of precision implements, locks, timepieces and firearms
- testing circuits in electronic timepieces and manufactured articles
- making and repairing tools, equipment and engineering patterns

Occupations in this minor group are classified into the following unit groups:

- 3231 Aircraft Maintenance Engineers
- 3232 Metal Fitters and Machinists
- 3235 Precision Metal Trades Workers
- 3236 Toolmakers and Engineering Patternmakers

UNIT GROUP 3231 AIRCRAFT MAINTENANCE ENGINEERS

AIRCRAFT MAINTENANCE ENGINEERS maintain and repair aircraft structures, and avionic and mechanical systems.

Indicative Skill Level:

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate III including at least two years of on-the-job training, or AQF Certificate IV (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 3)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Registration or licensing may be required.

Tasks include:

- disassembling, inspecting, testing, repairing and reassembling aircraft engines, ancillary motors and engine accessories, electrical systems, and subassemblies of aircraft frames
- installing electrical circuits and equipment
- testing aircraft communication equipment, aircraft instrumentation and electronic systems using electronic testing equipment and specialised test apparatus
- replacing and testing aircraft oxygen system components
- assembling parts and subassemblies of aircraft frames
- conducting routine pre-flight inspections of engines, aircraft frames and mechanical systems
- maintaining records of action taken
- may manufacture aircraft electrical, instrument and radio hardware components

Occupations:

- 323111 Aircraft Maintenance Engineer (Avionics)
- 323112 Aircraft Maintenance Engineer (Mechanical)
- 323115 Aircraft Maintenance Engineer (Structures)

323111 AIRCRAFT MAINTENANCE ENGINEER (AVIONICS)

Inspects, tests, aligns, repairs and installs aircraft electrical and avionic system components. Registration or licensing may be required.

Skill Level: 3

Specialisations:

- Aircraft Maintenance Engineer (Electrical)
- Aircraft Maintenance Engineer (Instruments)
- Aircraft Maintenance Engineer (Radio)
- Avionics Technician (Defence)
- Licensed Aircraft Maintenance Engineer (Electrical)
- Licensed Aircraft Maintenance Engineer (Instruments)
- Licensed Aircraft Maintenance Engineer (Radio)

UNIT GROUP 3231 AIRCRAFT MAINTENANCE ENGINEERS *continued*

323112 AIRCRAFT MAINTENANCE ENGINEER (MECHANICAL)

Inspects, tests, repairs and installs aircraft hydromechanical and flight system components and aircraft engines, subassemblies and components. Registration or licensing may be required.

Skill Level: 5

Specialisations:

- Aircraft Maintenance Engineer (Airframes)
- Aircraft Maintenance Engineer (Engines)
- Aircraft Technician (Air Force, Army)
- Aviation Technician (Navy)
- Licensed Aircraft Maintenance Engineer (Airframes)
- Licensed Aircraft Maintenance Engineer (Engines)

323113 AIRCRAFT MAINTENANCE ENGINEER (STRUCTURES)

Inspects, dismantles and reassembles aircraft structures, and repairs and replaces components of aircraft frames. Works with both metal and carbon fibre composite materials. Registration or licensing may be required.

Skill Level: 5

Specialisation:

- Aircraft Structural Fitter (Air Force, Army)

UNIT GROUP 3232 METAL FITTERS AND MACHINISTS

METAL FITTERS AND MACHINISTS fit and assemble fabricated metal parts into products, set up machining tools, production machines and textile machines, and operate machining tools and machines to shape metal stock and castings.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

MQF Certificate III including at least two years of on-the-job training, or MQF Certificate IV (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 3)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks include:

- studying drawings and specifications to determine suitable material, method and sequence of operations, and machine settings
- fitting fabricated metal parts into products and assembling metal parts and subassemblies to produce machines and equipment
- checking fabricated and assembled metal parts for accuracy, clearance and fit using precision measuring instruments
- setting guides, stops and other controls on machining tools, setting up prescribed cutting and shaping tools and dies in machines and presses, and setting controls for textile machines
- forming metal stock and castings to fine tolerances using machining tools to press, cut, grind, plane, bore and drill metal
- cutting, threading, bending and installing hydraulic and pneumatic pipes and lines
- preparing pattern mechanisms to control the operation of textile machines used to spin, weave, knit, sew and tuft fabric
- diagnosing faults and performing operational maintenance of machines, and overhauling and repairing mechanical parts and fluid power equipment
- may erect machines and equipment on-site

Occupations:

- 325211 Fitter (General)
- 325212 Fitter and Turner
- 325213 Fitter-Welder
- 325214 Metal Machinist (First Class)
- 325215 Textile, Clothing and Footwear Mechanic
- 325299 Metal Fitters and Machinists *nc*

UNIT GROUP 3232 METAL FITTERS AND MACHINISTS *continued*

323211 FITTER (GENERAL)

Fits and assembles metal parts and subassemblies to fabricate production machines and other equipment.

Skill Level: 5

Specialisations:

- Computer Numeric Control Setter
- Diesel Fitter-Mechanic
- Fitter-Machinist
- Fitter-Mechanic
- Maintenance Fitter
- Mechanic (Diesel and Heavy Earthmoving Equipment)
- Plant Mechanic

323212 FITTER AND TURNER

Fits, assembles, grinds and shapes metal parts and subassemblies to fabricate production machines and other equipment.

Skill Level: 5

Specialisation:

- Fitter Armament (Army)

323213 FITTER-WELDER

Fits, assembles and welds metal parts and subassemblies to fabricate production machines and other equipment.

Skill Level: 5

323214 METAL MACHINIST (FIRST CLASS)

Sets up and operates machine tools to shape and form metal stock and castings to fine tolerances, using detailed drawings and specifications.

Skill Level: 5

Specialisations:

- Aircraft Machinist
- Automotive Machinist
- Metal Machine Setter
- Metal Turner
- Milling Machinist
- Vertical Borer

MAJOR GROUP 3 *continued*

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UNIT GROUP 3232 METAL FITTERS AND MACHINISTS *continued*

323215 TEXTILE, CLOTHING AND FOOTWEAR MECHANIC

Sets up, adjusts and maintains industrial or domestic sewing machines, or machines used in the production of yarn, textiles or footwear.

Skill Level: 5

Specialisations:

Loom Tamer

Sewing Machine Mechanic

Textile Machine Mechanic

323299 METAL FITTERS AND MACHINISTS NEC

This occupation group covers Metal Fitters and Machinists not elsewhere classified.

Skill Level: 5

Occupations in this group include:

Printing Engineer

UNIT GROUP 3233 PRECISION METAL TRADES WORKERS

PRECISION METAL TRADES WORKERS fabricate, assemble, maintain and repair metal precision instruments.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate III including at least two years of on-the-job training, or AQF Certificate IV (ANZSCO Skill Level 5)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 5)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Registration or licensing may be required.

Tasks include:

- assembling parts and subassemblies of precision instruments, locks, timepieces and firearms
- disassembling precision instruments, locks, timepieces and firearms, repairing and replacing defective parts, and reassembling articles using hand and power tools and specially designed machines
- inscribing letters, figures and designs on surfaces of jewellery, trophies and other ornamental items
- installing security systems, changing tumblers in locks, changing locks, cutting keys and opening locks by manipulation
- calibrating precision instruments using standard weights and measures, jigs and fixtures, and hand tools to adjust and align parts and small balancing weights
- making blades for circular, hand and other power saws and repairing, setting and sharpening blades for hand and power saws
- testing circuits in electronic timepieces
- may estimate costs and prepare quotes for repairs

Occupations:

- 323511 Engraver
- 323512 Gunsmith
- 323515 Locksmith
- 323514 Precision Instrument Maker and Repairer
- 323515 Saw Maker and Repairer
- 323516 Watch and Clock Maker and Repairer

323511 ENGRAVER

Inscribes letters, figures and designs on metal, glass, wood, rubber, plastic and other surfaces.

Skill Level 5

323512 GUNSMITH

Modifies, services and repairs rifles, revolvers and other firearms. Registration or licensing is required.

Skill Level 5

UNIT GROUP 3233 PRECISION METAL TRADES WORKERS *continued*

323313 LOCKSMITH

Installs and maintains locks and related security devices and systems. Registration or licensing is required.

Skill Level: 5

Specialisation:

Safemaker

323314 PRECISION INSTRUMENT MAKER AND REPAIRER

Assembles, calibrates, installs and overhauls mechanical precision instruments and equipment.

Skill Level: 5

Specialisations:

Camera Repairer

Scalesmaker

Scientific Instrument Maker and Repairer

323315 SAW MAKER AND REPAIRER

Makes, repairs, sets and sharpens blades for circular, band and other saws.

Skill Level: 5

Specialisation:

Saw Sharpener

323316 WATCH AND CLOCK MAKER AND REPAIRER

Makes, repairs, cleans and adjusts watches and clocks.

Skill Level: 5

UNIT GROUP 3234 TOOLMAKERS AND ENGINEERING PATTERNMAKERS

TOOLMAKERS AND ENGINEERING PATTERNMAKERS make and repair tools, dies, jigs, fixtures and other precision parts and equipment to fine tolerances for machine tools and other production machinery, and construct full-size engineering, visual and experimental models and models for the manufacture of prototype developmental products.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate III including at least two years of on-the-job training, or AQF Certificate IV (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 3)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks Include:

- studying drawings and specifications to determine dimensions and tolerances of articles to be manufactured and models to be constructed
- measuring and marking out metal stock and castings using various gauges
- shaping metal and wood stock using machine tools
- checking accuracy of manufactured articles and finished patterns to fine tolerances, using precision measuring instruments
- testing and modifying manufactured articles
- applying protective finishes to patterns and painting pattern sections to indicate method of assembly
- assembling pattern sections and shaping work pieces to specified finish
- pouring and spreading materials into moulds and over models of patterns, and building laminations of fibreglass cloth and plastic resin to fabricate patterns
- repairing broken and damaged patterns and correcting patterns to compensate for defects in casting
- constructing templates for layout and inspection

Occupations:

- 323411 Engineering Patternmaker
- 323412 Toolmaker

323411 ENGINEERING PATTERNMAKER

Constructs full-size engineering models usually made out of timber, which are used in manufacturing to produce metal castings, copy models, vacuum form tooling and tooling for the automotive, aircraft or fibreglass industries.

Skill Level 3

UNIT GROUP 3234 TOOLMAKERS AND ENGINEERING PATTERNMAKERS

continued

323412 TOOLMAKER

Makes and repairs tools, dies, jigs, fixtures and other precision parts and equipment to fine tolerances for machine tools and other production machinery.

Skill Level 5

Specialisations:

Die Caster

Die Sinker

Jigmaker (Metal)

Plastic Mould Maker

Press-tool Maker

MINOR GROUP 324 PANELBEATERS, AND VEHICLE BODY BUILDERS, TRIMMERS AND PAINTERS

PANELBEATERS, AND VEHICLE BODY BUILDERS, TRIMMERS AND PAINTERS repair damage to motor vehicle bodies, construct purpose-built vehicle bodies, fit, repair and replace interior trim and upholstery in vehicles, and paint vehicles.

Fabrication Engineering Trades Workers are excluded from this minor group. Fabrication Engineering Trades Workers are included in Minor Group 322 Fabrication Engineering Trades Workers.

Indicative Skill Level

Most occupations in this minor group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate III including at least two years of on-the-job training, or AQF Certificate IV (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 3)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks include:

- removing, replacing and repairing damaged panels and parts using mechanical and hydraulic equipment
- filling depressions with plastic filler and chiselling and sanding surfaces
- constructing framework sections in metal, wood, fibreglass and other materials using stretching and shrinking machines and welding equipment
- bolting, screwing, riveting and welding sections together to form complete frameworks
- cutting and shaping panels of sheetmetal, aluminium and reinforced plastic and attaching to frameworks using hand and power tools
- preparing new vehicle trim work according to drawings and sketches, and removing old coverings and fittings from vehicles and taking new measurements
- selecting and cutting pieces of fabric, vinyl and leather and sewing pieces together using heavy-duty sewing machines
- installing and attaching interior lining, floor coverings, armrests, door trims, rubber seals, locks and handles
- masking areas not to be painted by covering with masking tape and paper
- selecting and mixing paint shades to match vehicle colour
- applying primer and finish coats with spray-guns, and sanding surfaces between coats

Occupations in this minor group are classified into the following unit groups:

- 3241 Panelbeaters
- 3242 Vehicle Body Builders and Trimmers
- 3245 Vehicle Painters

UNIT GROUP 3241 PANELBEATERS

PANELBEATERS repair damage to metal, fibreglass and plastic body work on vehicles, and form replacement vehicle panels.

Indicative Skill Level:

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate III including at least two years of on-the-job training, or AQF Certificate IV (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 3)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Registration or licensing may be required.

Tasks include:

- removing damaged panels and parts, and removing upholstery and accessories to gain access
- removing dents by hammering panels
- straightening damaged vehicles and parts using mechanical and hydraulic equipment
- replacing badly damaged sections with new or second-hand panels
- filling depressions with plastic filler, and filing, grinding and sanding required surfaces
- cutting and joining replacement sections using welding equipment
- fitting repaired or replacement panels on vehicles and refitting body hardware such as door locks and trims
- may assist vehicle body builders in constructing and restoring custom-designed, vintage and other specialty vehicles
- may spray-paint vehicles

Occupation:

324111 Panelbeater

324111 PANELBEATER

Alternative Title:

Vehicle Refinisher

Repairs damage to metal, fibreglass and plastic body work on vehicles and forms replacement vehicle panels.

Registration or licensing may be required.

Skill Level: 3

UNIT GROUP 3242 VEHICLE BODY BUILDERS AND TRIMMERS

VEHICLE BODY BUILDERS AND TRIMMERS manufacture and repair prototype production units and purpose-built vehicle bodies, and install, repair and replace the interior trim of vehicles.

Indicative Skill Level:

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate III including at least two years of on-the-job training, or AQF Certificate IV (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 3)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Registration or licensing may be required.

Tasks include:

- constructing framework sections in metal, wood, fibreglass and other materials using shaping machines and cutting and welding equipment
- bolting, screwing, riveting and welding sections together to form complete frameworks
- cutting and shaping panels of sheetmetal, aluminium and reinforced plastic and attaching to frameworks using hand and power tools
- modifying assembly line vehicles to special requirements
- preparing new vehicle trim work according to drawings and sketches, and removing old coverings and fittings from vehicles and taking new measurements
- selecting and cutting pieces of fabric, vinyl and leather and sewing pieces together using heavy-duty sewing machines
- installing internal trim in vehicles such as lining, floor coverings and armrests
- attaching door trims, rubber seals, locks and handles

Occupations:

324211 Vehicle Body Builder

324212 Vehicle Trimmer

324211 VEHICLE BODY BUILDER

Alternative Title:

Vehicle Body Maker

Manufactures and repairs prototype production units and purpose-built vehicle bodies such as buses, trucks, fire engines and caravans. Registration or licensing may be required.

Skill Level: 3

Specialisations:

Coach Builder

MAJOR GROUP 3 *continued*

UNIT GROUP 3242 VEHICLE BODY BUILDERS AND TRIMMERS *continued*

324212 VEHICLE TRIMMER

Installs, repairs and replaces the interior trim of vehicles such as seats, linings, floor coverings and door trims.
Registration or licensing may be required.

Skill Level: 5

Specialisation:

Vehicle Upholsterer

UNIT GROUP 3243 VEHICLE PAINTERS

VEHICLE PAINTERS prepare surfaces of vehicles, match and mix colours and apply paint.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate III including at least two years of on-the-job training, or AQF Certificate IV (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 3)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Registration or licensing may be required.

Tasks include:

- removing rough spots on vehicle panels
- sanding surfaces by hand and with power sanders
- masking areas not to be painted with tape and paper
- colour matching and mixing paints to match paint shades, and selecting pre-mixed paint
- applying primer and finishing coats using spray-guns, and sanding surfaces between coats
- touching up paintwork and applying polish to vehicles
- removing masking papers, and washing and polishing finished paintwork
- painting signs and artwork on vehicles
- treating vehicles with rust-proofing chemicals

Occupation:

324311 Vehicle Painter

324311 VEHICLE PAINTER

Prepares surfaces of vehicles, matches and mixes colours and applies paint. Registration or licensing may be required.

Skill Level 3

SUB-MAJOR GROUP 33 CONSTRUCTION TRADES WORKERS

CONSTRUCTION TRADES WORKERS construct and repair buildings and other structures, apply final finishes such as plaster, painting and flooring, make and install glass products, and provide plumbing, drainage and mechanical services.

Indicative Skill Level

Most occupations in this sub-major group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

MQF Certificate III including at least two years of on-the-job training, or MQF Certificate IV (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 3)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks include:

- studying drawings and plans, and estimating quantities of materials required
- laying bricks and blocks, spreading mortar between joints, and removing excess mortar
- erecting frameworks, roof frames, roofs and walls
- laying flooring, carpets and tiles
- painting and wallpapering surfaces
- applying plaster and cement coatings to walls
- building and installing fittings
- making and installing glass products
- installing plumbing and drainage systems, guttering and other rainwater systems
- installing gas appliances and airconditioning piping and ducting

Occupations in this sub-major group are classified into the following minor groups:

- 331 Bricklayers, and Carpenters and Joiners
- 332 Floor Finishers and Painting Trades Workers
- 333 Glaziers, Plasterers and Tilers
- 334 Plumbers

MINOR GROUP 331 BRICKLAYERS, AND CARPENTERS AND JOINERS

BRICKLAYERS, CARPENTERS AND JOINERS construct and erect buildings and other structures of brick, stone and timber.

Indicative Skill Level

Most occupations in this minor group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate III including at least two years of on-the-job training, or AQF Certificate IV (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 3)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks include:

- studying plans and specifications to determine materials required, dimensions and installation procedures
- erecting frameworks, roof framing and scaffolding, and laying sub-floors and floorboards
- operating machines and hand tools to cut and shape stones, bricks and timber
- laying bricks and stone blocks in rows and securing with mortar to construct walls
- assembling prepared wood to form structures ready to install
- nailing fascia panels, sheathing roofs, and fitting wall cladding and door and window frames
- checking vertical and horizontal alignment

Occupations in this minor group are classified into the following unit groups:

- 3311 Bricklayers and Stonemasons
- 3312 Carpenters and Joiners

UNIT GROUP 3311 BRICKLAYERS AND STONEMASONS

BRICKLAYERS AND STONEMASONS lay bricks, pre-cut stones and other types of building blocks in mortar to construct and repair walls, partitions, arches and other structures, and cut and shape hard and soft stone blocks and masonry slabs for the construction and renovation of stone structures and monumental masonry.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate III including at least two years of on-the-job training, or AQF Certificate IV (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 3)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Registration or licensing may be required.

Tasks include:

- studying plans and specifications to determine materials required, dimensions and installation procedures
- erecting and dismantling restricted height scaffolding
- sealing foundations with damp-resistant materials and spreading layers of mortar to serve as base and binder for blocks using trowels
- laying bricks in rows, designs and shapes, and spreading mortar between joints
- embedding blocks in mortar and removing excess mortar
- checking vertical and horizontal alignment
- cutting, shaping and polishing stones and bricks using machines and hand tools, and shaping bricks to fit irregular spaces
- repairing and maintaining bricks, cement blocks and related structures
- designing and cutting monumental masonry and lettering
- constructing walls using stone slabs and large masonry slab blocks

Occupations:

331111 Bricklayer

331112 Stonemason

UNIT GROUP 3311 BRICKLAYERS AND STONEMASONS *continued*

331111 BRICKLAYER

Alternative Title:

Blocklayer

Lays bricks, pre-cut stone and other types of building blocks in mortar to construct and repair walls, partitions, arches and other structures. Registration or licensing may be required.

Skill Level 3

Specialisations:

Arch Builder

Chimney Builder

Refractory Bricklayer

Retort Setter (Bricklaying)

Tuckpointer

331112 STONEMASON

Cuts and shapes hard and soft stone blocks and masonry slabs to construct and renovate stone structures and monumental masonry. Registration or licensing may be required.

Skill Level 3

Specialisations:

Construction Stonemason

Monumental Stonemason

UNIT GROUP 3312 CARPENTERS AND JOINERS

CARPENTERS AND JOINERS construct, erect, install, renovate and repair structures and fixtures made of wood, plywood, wallboard and other materials, and cut, shape and fit timber parts to form structures and fittings.

Indicative Skill Level:

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate III including at least two years of on-the-job training, or AQF Certificate IV (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 3)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Registration or licensing may be required.

Tasks include:

- studying drawings and specifications to determine materials required, dimensions and installation procedures
- ordering and selecting timbers and materials, and preparing layouts
- cutting materials, and assembling and nailing cut and shaped parts
- erecting framework and roof framing, laying sub-flooring and floorboards and verifying trueness of structures
- nailing fascia panels, sheathing roofs, and fitting exterior wall cladding and door and window frames
- assembling prepared wood to form structures and fittings ready to install
- cutting wood joints
- may construct concrete formwork
- may repair existing fittings
- may work with plastic laminates, perspex and metals

Occupations:

331211 Carpenter and joiner

331212 Carpenter

331215 Joiner

331211 CARPENTER AND JOINER

Constructs and installs structures and fixtures of wood, plywood, and wallboard, and cuts, shapes and fits timber parts to form structures and fittings. Registration or licensing may be required.

Skill Level: 3

Specialisation:

Shopfitter

UNIT GROUP 3312 CARPENTERS AND JOINERS *continued*

331212 CARPENTER

Constructs, erects, installs, renovates and repairs structures and fixtures of wood, plywood, wallboard and other materials. Registration or licensing may be required.

Skill Level 3

Specialisations:

- Fibreg Carpenter
- Formwork Carpenter
- Prop and Scenery Maker

331213 JOINER

Cuts, shapes and fits timber parts in workshops to form structures and fittings, ready for installation. Registration or licensing may be required.

Skill Level 3

Specialisations:

- Joinery Machinist
- Joinery Patternmaker
- Joinery Setter-out

MINOR GROUP 332 FLOOR FINISHERS AND PAINTING TRADES WORKERS

FLOOR FINISHERS AND PAINTING TRADES WORKERS install and repair soft and resilient floor coverings, and apply paint, varnish, wallpaper and other finishes to protect, maintain and decorate the surfaces of buildings and structures.

Indicative Skill Level

Most occupations in this minor group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate III including at least two years of on-the-job training, or AQF Certificate IV (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 3)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks include:

- measuring areas to be covered and consulting plans to estimate quantities of floor covering materials required
- preparing surfaces by removing old floor coverings, paint and wallpaper, fixing woodwork, filling holes and cracks, smoothing and sealing surfaces, and removing baseboard trim
- measuring, cutting and fixing underlay materials
- laying underlay and covering materials on floors, matching patterns, cutting shapes around fixtures and trimming edges
- selecting and preparing paints to required colours by mixing portions of pigment, oil, thinning and drying additives
- applying paints, varnishes and stains to surfaces using brushes, rollers and sprays, and hanging wallpaper

Occupations in this minor group are classified into the following unit groups:

3321 Floor Finishers

3322 Painting Trades Workers

UNIT GROUP 3321 FLOOR FINISHERS

FLOOR FINISHERS measure, cut, install and repair soft and resilient floor coverings.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate III including at least two years of on-the-job training, or AQF Certificate IV (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 3)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Registration or licensing may be required.

Tasks include:

- measuring areas to be covered and consulting plans to estimate quantities of floor covering materials required
- preparing surfaces for covering and removing baseboard trims
- measuring, cutting and fitting underlay materials
- laying coverings, such as carpets, linoleum, parquet blocks, cork tiles and other resilient flooring materials, over floors, matching patterns, cutting shapes around fixtures and trimming edges
- securing floor coverings and fitting edge trims in doorways
- sanding, staining and applying finishing coatings to timber floors
- may install wall, ceiling, counter and bench coverings

Occupation:

332111 Floor Finisher

332111 FLOOR FINISHER

Measures, cuts, installs and repairs soft and resilient floor coverings. Registration or licensing may be required.

Skill Level: 3

Specialisations:

Carpet Layer

Parquet Layer

UNIT GROUP 3322 PAINTING TRADES WORKERS

PAINTING TRADES WORKERS apply paint, varnish, wallpaper and other finishes to protect, maintain and decorate surfaces of buildings and structures.

Indicative Skill Level:

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate III including at least two years of on-the-job training, or AQF Certificate IV (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 3)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Registration or licensing may be required.

Tasks include:

- erecting scaffolding and ladders, and placing drop sheets to protect adjacent areas from paint splattering
- preparing surfaces by removing old paint and wallpaper, fixing woodwork, filling holes and cracks, and smoothing and sealing surfaces
- selecting and preparing paints to required colours by mixing portions of pigment, oil, and thinning and drying additives
- applying paints, varnishes and stains to surfaces using brushes, rollers and sprays
- hanging wallpaper, matching patterns and trimming edges
- cleaning equipment and work areas
- may repair windows and replace glass in wooden and metal frames
- may lay and repair wall and floor tiles

Occupation:

332211 Painting Trades Worker

332211 PAINTING TRADES WORKER

Applies paint, varnish, wallpaper and other finishes to protect, maintain and decorate surfaces of buildings and structures. Registration or licensing may be required.

Skill Level: 3

Specialist role:

Paperhanger

MINOR GROUP 333 GLAZIERS, PLASTERERS AND TILERS

GLAZIERS, PLASTERERS AND TILERS cut and install flat glass, apply plaster and secure plasterboard and suspended ceilings, and lay tiles on roofs, walls and floors.

Indicative Skill Level

Most occupations in this minor group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate III including at least two years of on-the-job training, or AQF Certificate IV (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 3)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks include:

- studying drawings and taking measurements to determine materials required
- preparing surfaces and materials by removing old tiles, grout and adhesive, mixing plaster and cement, and marking and cutting glass
- installing glass and mirrors in windows, skylights, display cases, interior walls and ceilings
- measuring, marking and cutting plasterboard, lifting and positioning panels, and securing them to walls, ceilings and battens
- applying coats of plaster to structures using trowels, and levelling and smoothing coats to uniform thickness
- aligning starter rows of roofing material with edges of roofs, securing with wire, staples or nails, and overlapping successive layers of tiles
- spreading adhesive onto prepared surfaces and tiles, and setting tiles in position
- grouting tiles, and ensuring surfaces are waterproof

Occupations in this minor group are classified into the following unit groups:

- 3331 Glaziers
- 3332 Plasterers
- 3333 Roof Tiles
- 3334 Wall and Floor Tiles

UNIT GROUP 3331 GLAZIERS

GLAZIERS measure, cut, finish, fit and install flat glass and mirrors.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate III including at least two years of on-the-job training, or AQF Certificate IV (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 3)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks include:

- determining type and dimensions of glass required
- laying glass over patterns on padded tables and in jigs
- measuring and marking glass for cutting
- examining glass and marking defective areas
- cutting along patterns and templates
- breaking off sheets and excess glass with notched tools and glass pliers
- installing glass and mirrors in windows, skylights, display cases, interior walls and ceilings
- smoothing rough edges using belt sanders and smoothing wheels
- may coat, cut, etch, trim and treat glass to achieve special effects

Occupation:

333111 Glazier

333111 GLAZIER

Measures, cuts, finishes, fits and installs flat glass and mirrors.

Skill Level 3

Specialisations:

- Glass Beveler
- Glass Embosser
- Glass Etcher
- Glass Silverer

UNIT GROUP 3332 PLASTERERS

PLASTERERS apply and fix plasterboard partitions, suspended ceilings, fire rating systems, acoustic tiles, and composite wall linings to buildings, and apply decorative and protective coverings of plaster, cement and similar materials to the interiors and exteriors of structures.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

MQF Certificate III including at least two years of on-the-job training, or MQF Certificate IV (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 3)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Registration or licensing may be required.

Tasks include:

- determining plasterboard layout, and installing insulation and vapour barriers
- measuring, marking and cutting plasterboard, lifting and positioning panels, and securing them to walls, ceilings and battens
- preparing corner beads and securing them in position
- fixing pre-cast cornices, panel mouldings, ceiling centres and other plaster fittings
- covering joints and nail holes with wet plaster and sealing compounds, and smoothing them using wet brushes and sand paper
- mixing and applying coats of plaster, cement and render to structures using trowels, and levelling and smoothing coats to uniform thickness
- plumbing and straightening corners, angles and wall and ceiling surfaces
- creating decorative textures in finishing coats
- applying and finishing acoustic, insulating and fireproofing materials bonded with plaster, plastic cement and similar materials

Occupations:

333211 Fibrous Plasterer

333212 Solid Plasterer

333211 FIBROUS PLASTERER

Applies and fixes plasterboard partitions, suspended ceilings, fire rating systems, acoustic tiles, and composite wall linings to buildings. Registration or licensing may be required.

Skill Level: 3

Specialisations:

Dry Wall Plasterer

333212 SOLID PLASTERER

Applies decorative and protective coverings of plaster, cement and similar materials to the interiors and exteriors of structures. Registration or licensing may be required.

Skill Level: 3

UNIT GROUP 3333 ROOF TILERS

ROOF TILERS cover roofs with tiles, sheets and shingles to form a waterproof surface.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate III including at least two years of on-the-job training, or AQF Certificate IV (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 3)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Registration or licensing may be required.

Tasks include:

- studying drawings, specifications and work sites to determine materials required
- erecting ladders and scaffolds
- placing and securing waterproof sheets over eaves
- nailing and stapling roofing underlay to roofs
- aligning starter rows of roofing material with edges of roofs, securing with wire, staples and nails, and overlapping successive layers of tiles
- sizing and cutting roofing material to fit around vents, chimney edges, corners and ridges
- fixing edge and ridge tiles in cement mortar
- slipping roofing material under pre-fabricated flashing and nailing it down
- caulking and flashing exposed nail heads to prevent leaks

Occupation:

333311 Roof Tiler

333311 ROOF TILER

Cover roofs with tiles, sheets and shingles to form a waterproof surface. Registration or licensing may be required.

Skill Level: 3

Specialisations:

- Roof Fixer
- Roof Shingler
- Roof Slater

UNIT GROUP 3334 WALL AND FLOOR TILERS

WALL AND FLOOR TILERS lay ceramic, clay, slate, marble and glass tiles on external and internal walls and floors to provide protective and decorative finishes.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate III including at least two years of on-the-job training, or AQF Certificate IV (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 3)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Registration or licensing may be required.

Tasks include:

- examining plans, measuring and marking surfaces and laying out work
- preparing wall and floor surfaces by removing old tiles, grout and adhesive, filling holes and cracks, and clearing surfaces
- spreading adhesive onto prepared surfaces and tiles, and setting tiles in position
- using tile-cutting tools to cut and shape tiles needed for edges and corners, and around objects such as fittings and pipes
- ensuring tiles are correctly aligned and spaced
- grouting tiles, and cleaning and removing excess grout
- applying waterproofing systems
- may lay floors of granolithic, terrazzo, cement or similar composition
- may lay coloured tiles in patterns to create mosaics

Occupation:

333411 Wall and Floor Tiler

333411 WALL AND FLOOR TILER

Lays ceramic, clay, slate, marble and glass tiles on external and internal walls and floors to provide protective and decorative finishes. Registration or licensing may be required.

Skill Level: 3**Specialisations:**

Ceramic Tiler
Mosaic Tiler

MINOR GROUP 334 PLUMBERS

PLUMBERS install, maintain and repair pipes, drains, guttering and metal roofing, mechanical services and related equipment for water supply, gas, drainage, sewerage, heating, cooling and ventilation systems.

Indicative Skill Level

Most occupations in this minor group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate III including at least two years of on-the-job training, or AQF Certificate IV (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 3)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks include:

- studying blueprints, drawings and specifications to determine the layout of plumbing systems and materials required
- setting out and installing hot and cold water systems and associated equipment
- installing water-based fire protection systems, including fire hydrants, hose reels and sprinkler systems
- designing and installing sanitary plumbing and water supply systems, discharge pipes and sanitary fixtures
- fabricating and installing soil and waste stacks
- assembling and installing mechanical services plant, air handling and conditioning equipment and small bore heating systems
- installing sewerage and effluent pumping equipment and disposal systems
- installing below-ground drainage systems and associated ground support systems
- installing gas appliances, flues and pressure regulating devices
- fabricating and installing metal roofing, rainwater goods and flashings

Occupations in this minor group are classified into the following unit group:

3341 Plumbers

UNIT GROUP 3341 PLUMBERS

PLUMBERS install, maintain and repair pipes, drains, guttering and metal roofing, mechanical services and related equipment for water supply, gas, drainage, sewerage, heating, cooling and ventilation systems.

Indicative Skill Level:

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate III including at least two years of on-the-job training, or AQF Certificate IV (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 3)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Registration or licensing is required.

Tasks include:

- studying blueprints, drawings and specifications to determine the layout of plumbing systems and materials required
- setting out and installing hot and cold water systems and associated equipment
- installing water-based fire protection systems, including fire hydrants, hose reels and sprinkler systems
- designing and installing sanitary plumbing and water supply systems, discharge pipes and sanitary fixtures
- fabricating and installing soil and waste stacks
- assembling and installing mechanical services plant, air handling and conditioning equipment and small bore heating systems
- installing sewerage and effluent pumping equipment and disposal systems
- installing below-ground drainage systems and associated ground support systems
- installing gas appliances, flues and pressure regulating devices
- fabricating and installing metal roofing, rainwater goods and flashings

Occupations:

- 334111 Plumber (General)
- 334112 Airconditioning and Mechanical Services Plumber
- 334115 Drainer (Aus) / Drainslayer (NZ)
- 334114 Gasfitter
- 334115 Roof Plumber

334111 PLUMBER (GENERAL)

Installs and repairs water, drainage, gas and sewerage pipes and systems. Registration or licensing is required.

Skill Level 3

Specialisations:

- Fire Services Plumber
- Sanitary Plumber
- Water Plumber

UNIT GROUP 3341 PLUMBERS *continued***334112 AIRCONDITIONING AND MECHANICAL SERVICES PLUMBER**

Installs, maintains and repairs piping, ducting and equipment for heating, cooling and ventilation of buildings or vessels. Registration or licensing is required.

Skill Level 3

Specialisation:

Ductfixing Plumber

334113 DRAINER (AUS) / DRAINLAYER (NZ)

Installs, maintains and designs below-ground drainage systems and associated sewerage or effluent disposal systems. Registration or licensing is required.

Skill Level 3

Specialisation:

Septic Tank Installer

334114 GASFITTER

Installs, maintains and repairs gas mains, piping systems downstream of the billing meter, and appliances and ancillary equipment associated with the use of fuel gases, including liquefied petroleum gas systems. Registration or licensing is required.

Skill Level 3

Specialisations:

Gas Main and Line Fitter

Liquefied Petroleum Gasfitter

334115 ROOF PLUMBER

Installs, maintains and repairs flashings, metallic roof and wall claddings and rainwater products such as gutters and downpipes. Registration or licensing is required.

Skill Level 3

Specialisation:

Industrial Roof Plumber

**SUB-MAJOR GROUP 34 ELECTROTECHNOLOGY AND TELECOMMUNICATIONS
TRADES WORKERS**

ELECTROTECHNOLOGY AND TELECOMMUNICATIONS TRADES WORKERS assemble, install, test and repair electrical appliances, networks and circuits, electronic systems and equipment, lifts, refrigeration and air-conditioning equipment, electrical distribution networks, and telecommunications equipment.

Indicative Skill Level

Most occupations in this sub-major group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate III including at least two years of on-the-job training, or AQF Certificate IV (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 3)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks Include:

- examining blueprints, wiring diagrams and specifications to determine location and connections for installations
- testing for, locating and repairing electrical malfunctions
- cutting and connecting wiring and cables
- assembling, fabricating and installing electrical and electronic systems, networks, components and appliances
- installing, testing and adjusting electrical and mechanical parts of lifts
- installing and maintaining refrigeration and air-conditioning equipment, and connecting electrical systems and appliances to power supplies
- installing, maintaining and repairing telecommunications and data transmission equipment
- transmitting and receiving radio messages

Occupations in this sub-major group are classified into the following minor groups:

341 Electricians

342 Electronics and Telecommunications Trades Workers

MINOR GROUP 341 ELECTRICIANS

ELECTRICIANS design, assemble, install, test, commission, diagnose, maintain and repair electrical networks, systems, circuits, equipment, components, appliances and facilities for industrial, commercial and domestic purposes, and service and repair lifts, escalators and related equipment.

Automotive Electricians are excluded from this minor group. Automotive Electricians are included in Minor Group 521 Automotive Electricians and Mechanics.

Indicative Skill Level

Most occupations in this minor group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate III including at least two years of on-the-job training, or AQF Certificate IV (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 3)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks include:

- examining blueprints, wiring diagrams and specifications to determine sequences and methods of operation
- measuring and laying out installation reference points
- selecting, cutting and connecting wire and cable to terminals and connections
- using electrical and electronic test instruments to trace and diagnose faults
- repairing or replacing faulty wiring and defective parts
- positioning and installing electrical switchboards
- connecting electrical systems to power supply
- testing continuity of circuit
- installing, testing and adjusting electric and mechanical parts of lifts

Occupations in this minor group are classified into the following unit group:

3411 Electricians

UNIT GROUP 3411 ELECTRICIANS

ELECTRICIANS design, assemble, install, test, commission, diagnose, maintain and repair electrical networks, systems, circuits, equipment, components, appliances and facilities for industrial, commercial and domestic purposes, and service and repair lifts, escalators and related equipment.

Automotive Electricians are excluded from this unit group. Automotive Electricians are included in Unit Group 3211 Automotive Electricians.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate III including at least two years of on-the-job training, or AQF Certificate IV (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 3)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Registration or licensing is required.

Tasks include:

- examining blueprints, wiring diagrams and specifications to determine sequences and methods of operation
- measuring and laying out installation reference points
- selecting, cutting and connecting wire and cable to terminals and connectors
- using electrical and electronic test instruments to trace and diagnose faults
- repairing and replacing faulty wiring and defective parts
- positioning and installing electrical switchboards
- connecting electrical systems to power supply
- testing continuity of circuit
- installing, testing and adjusting electric and mechanical parts of lifts

Occupations:

- 341111 Electrician (General)
- 341112 Electrician (Special Class)
- 341115 Lift Mechanic

UNIT GROUP 3411 ELECTRICIANS *continued*

341111 ELECTRICIAN (GENERAL)

Alternative Title:

Electrical Fitter

Installs, tests, connects, commissions, maintains and modifies electrical equipment, wiring and control systems. Registration or licensing is required.

Skill Level: 5

Specialisations:

Armature Winder

Electrical Contractor

Heavy Coil Winder

Railway Signal Electrician

341112 ELECTRICIAN (SPECIAL CLASS)

Services and repairs intricate and complex electrical and electronic circuitry. Registration or licensing is required.

Skill Level: 5

341113 LIFT MECHANIC

Alternative Title:

Lift Electrician

Designs, installs, maintains, services and repairs electric and hydraulic passenger and freight lifts, escalators, moving walkways and other lift equipment. Registration or licensing is required.

Skill Level: 5

MINOR GROUP 342 ELECTRONICS AND TELECOMMUNICATIONS TRADES WORKERS

ELECTRONICS AND TELECOMMUNICATIONS TRADES WORKERS assemble, install, test and repair electronic systems and equipment, electrical distribution and telecommunications networks, air conditioning and refrigeration equipment, business machines and telecommunications equipment, and transmit and receive radio messages.

Indicative Skill Level

Most occupations in this minor group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate III including at least two years of on-the-job training, or AQF Certificate IV (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 3)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks include:

- examining blueprints, wiring diagrams and specifications to determine job requirements
- testing for, locating, diagnosing and repairing electrical malfunctions
- cutting and connecting wiring and cables
- installing and maintaining air conditioning and refrigeration equipment, and connecting electrical systems and appliances to power supplies
- installing conductors, aerial and underground cables, and equipment associated with electrical supply
- installing, modifying, maintaining, adjusting and repairing business machines, radio and television receivers, audio and visual reproduction equipment, and electronic instruments and control systems
- transmitting and receiving radio messages
- installing, maintaining and repairing telecommunications and voice and data transmission equipment and appliances

Occupations in this minor group are classified into the following unit groups:

- 3421 Airconditioning and Refrigeration Mechanics
- 3422 Electrical Distribution Trades Workers
- 3423 Electronics Trades Workers
- 3424 Telecommunications Trades Workers

UNIT GROUP 3421 AIRCONDITIONING AND REFRIGERATION MECHANICS

AIRCONDITIONING AND REFRIGERATION MECHANICS assemble, install, maintain and repair industrial, commercial and domestic airconditioning and refrigeration systems and equipment.

Indicative Skill Level:

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate III including at least two years of on-the-job training, or AQF Certificate IV (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 3)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Registration or licensing may be required.

Tasks include:

- establishing job requirements from drawings and specifications, and laying out installation reference points
- drilling holes, installing mounting brackets and cutting, bending and threading piping
- installing and repairing components such as compressors, motors, condensers, evaporators, switches and gauges, and copper lines for steam, gas, refrigerant, compressed air, oil and chilled water
- bolting, soldering, riveting, welding and brazing pipes to connect equipment, and checking alignment and accuracy of fit
- filling systems with gas or fluid to check for leaks
- test operating refrigeration systems, checking mechanisms and making adjustments
- removing test gas and fluid using vacuum pumps, and filling with refrigerant
- checking and overhauling refrigeration systems, diagnosing faults and repairing and replacing defective components
- adjusting system controls and mechanisms and reassembling systems
- recording causes of malfunctioning and action taken

Occupation:

342111 Airconditioning and Refrigeration Mechanic

342111 AIRCONDITIONING AND REFRIGERATION MECHANIC

Assembles, installs, maintains and repairs industrial, commercial and domestic airconditioning and refrigeration systems and equipment. Registration or licensing may be required.

Skill Level: 5

UNIT GROUP 3422 ELECTRICAL DISTRIBUTION TRADES WORKERS

ELECTRICAL DISTRIBUTION TRADES WORKERS prepare, install, repair, maintain and patrol electric power distribution networks.

Indicative Skill Level:

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate III including at least two years of on-the-job training, or AQF Certificate IV (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 3)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Registration or licensing may be required.

Tasks include:

- installing conductors and aerial equipment, and underground cables and equipment
- installing and maintaining equipment associated with electrical supply such as transformers
- attending to electrical breakdown and emergencies
- maintaining poles and associated hardware, and continuity of electrical supply and street lighting
- conducting routine maintenance on the aerial and underground electricity supply network
- conducting low-voltage switching operations
- fitting pole hardware and crossarms
- preparing low- and high-voltage cable joints and cable terminations while connecting and installing electrical equipment and overhead lines
- using heavy plant equipment such as elevated work platforms and portable equipment such as hydraulic drills
- may undertake substation installation and maintenance, and specialised testing and revenue meter installation

Occupations:

342211 Electrical Linesworker (Aus) / Electrical Line Mechanic (NZ)

342212 Technical Cable Joiner

342211 ELECTRICAL LINESWORKER (AUS) / ELECTRICAL LINE MECHANIC (NZ)

Installs, maintains, repairs and patrols electrical sub-transmission and distribution systems. Registration or licensing may be required.

Skill Level: 3

Specialisations:

Electrical Linesworker (Distribution) (Aus) / Electrical Line Mechanic (Distribution) (NZ)

Electrical Linesworker (Transmission) (Aus) / Electrical Line Mechanic (Transmission) (NZ)

Railway Traction Line Worker

MAJOR GROUP 3 *continued*

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UNIT GROUP 3422 ELECTRICAL DISTRIBUTION TRADES WORKERS *continued*

342212 TECHNICAL CABLE JOINTER

Joins insulated electric power cables installed in underground conduits and trenches, and prepares cable terminations for connection to electrical equipment and overhead lines. Registration or licensing may be required.

Skill Level 5

UNIT GROUP 3423 ELECTRONICS TRADES WORKERS

ELECTRONICS TRADES WORKERS maintain, adjust and repair electronic equipment such as commercial and office machines, video and audio equipment, and electronic instruments and control systems, and transmit and receive radio messages.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate III including at least two years of on-the-job training, or AQF Certificate IV (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 3)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Registration or licensing may be required.

Tasks include:

- examining and testing machines, equipment, instruments and control systems to diagnose faults
- adjusting, repairing, and replacing worn and defective parts and wiring, and maintaining machines, equipment and instruments
- reassembling, test operating and adjusting equipment
- advising users of correct operating procedures to prevent malfunctions
- receiving messages by interpreting code and converting to plain language, and writing and typing messages for transmission
- monitoring radio traffic, and transmitting and receiving voice messages
- installing electronic instruments and control systems
- applying knowledge of electrical, electronic, mechanical, hydraulic and pneumatic principles in commissioning and maintaining control systems

Occupations:

- 342311 Business Machine Mechanic
- 342312 Communications Operator
- 342313 Electronic Equipment Trades Worker
- 342314 Electronic Instrument Trades Worker (General)
- 342315 Electronic Instrument Trades Worker (Special Class)

342311 BUSINESS MACHINE MECHANIC

Maintains, adjusts and repairs computers, photocopiers, fax machines, cash registers and other electronic commercial and office machines.

Skill Level: 3

UNIT GROUP 3423 ELECTRONICS TRADES WORKERS *continued*

342312 COMMUNICATIONS OPERATOR

Transmits and receives radio messages by use of morse code, voice and radio teletype.

Skill Level 5

Specialisations:

Communication Information Systems Sailor (Navy)

Communications and Information Systems Controller (Air Force)

Operator Specialist Communications (Army)

342313 ELECTRONIC EQUIPMENT TRADES WORKER

Maintains, adjusts and repairs radio and television receivers, and related audio and visual reproduction equipment such as video cameras, digital versatile disc players, compact disc players and video cassette recorders.

Skill Level 5

342314 ELECTRONIC INSTRUMENT TRADES WORKER (GENERAL)

Alternative Title:

Instrument and Control Service Person

Installs, modifies, maintains and repairs electronic instruments and control systems. Registration or licensing may be required.

Skill Level 5

Specialisations:

Communication Electronic Technician (Air Force)

Electronic Technician (Navy)

342315 ELECTRONIC INSTRUMENT TRADES WORKER (SPECIAL CLASS)

Alternative Title:

Industrial Measurement and Control Technician

Installs, modifies, maintains and repairs complex electronic instruments and control systems which involve a combination of electrical, electronic, mechanical, hydraulic and pneumatic principles. Registration or licensing may be required.

Skill Level 5

UNIT GROUP 3424 TELECOMMUNICATIONS TRADES WORKERS

TELECOMMUNICATIONS TRADES WORKERS install, maintain and repair data transmission equipment, aerial lines, conduits, cables, radio antennae and telecommunications equipment and appliances.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate III including at least two years of on-the-job training, or AQF Certificate IV (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 3)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or relevant vendor certification may be required in addition to the formal qualification.

Tasks include:

- examining drawings, specifications and work areas to determine positioning and connections for equipment to be installed
- locating faults in telecommunications equipment using instruments such as ohmmeters, voltmeters, ammeters and transmission measuring equipment
- attaching wires and cables to appliances
- adjusting, replacing and repairing faulty items, and testing equipment using electronic instruments
- installing cabling for telephone, radio, pay TV and computer transmission
- joining cables and sealing sheaths with lead and thermoplastic
- erecting, testing and maintaining aerial and underground wires and cables, and radio and mobile phone antennae
- installing telecommunications equipment and appliances such as telephones, switchboards and data transmission equipment

Occupations:

- 342411 Cabler (Data and Telecommunications)
- 342412 Telecommunications Cable Joiner
- 342413 Telecommunications Linesworker (Aus) / Telecommunications Line Mechanic (NZ)
- 342414 Telecommunications Technician

342411 CABLER (DATA AND TELECOMMUNICATIONS)

Installs internal telecommunications and data cabling, equipment and peripherals for computer networks, telephony, cable television and monitored security and fire alarms.

Skill Level: 5

UNIT GROUP 3424 TELECOMMUNICATIONS TRADES WORKERS *continued*

342412 TELECOMMUNICATIONS CABLE JOINER

Joins, terminates and repairs copper and fibre optic telecommunication cables installed in underground pipes, trenches and overhead systems.

Skill Level 5

Specialisations:

Fibre Optic Cable Splicer

Fibre Optics Joiner

342413 TELECOMMUNICATIONS LINESWORKER (AUS) / TELECOMMUNICATIONS LINE MECHANIC (NZ)

Installs, maintains and repairs external telecommunication equipment such as aerial lines, conduits and underground cables, radio and mobile phone antennae, and limited items of terminal equipment.

Skill Level 5

Specialisation:

Operator Beater Systems (Army)

342414 TELECOMMUNICATIONS TECHNICIAN

Alternative Title:

Communications Technician

Installs, maintains and repairs telecommunication equipment and appliances, such as telephones, mobile telephones, switchboards and data transmission equipment, in homes, businesses, telephone exchanges and other network sites.

Skill Level 5

Specialisation:

Technician Telecommunication Systems (Army)

UNIT GROUP 3942 WOOD MACHINISTS AND OTHER WOOD TRADES WORKERS

WOOD MACHINISTS AND OTHER WOOD TRADES WORKERS set up and operate woodworking machines and wood turning lathes to shape wood stock, finish and polish furniture, and make picture frames and frame paintings, photographs and other artwork.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

MQF Certificate III including at least two years of on-the-job training, or MQF Certificate IV (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 3)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks include:

- studying drawings, work orders and sample parts to determine specifications
- determining tooling and machine requirements and sequence of operations
- setting up woodworking machines and wood stock for correct cutting, planing, turning, shaping and sanding
- operating machines to cut, plane, turn, shape and sand work pieces
- removing old finishes by stripping with steel wool and glasspaper, and by applying solvents and paint strippers, and removing softened finishes by scraping
- applying varnish, shellac, lacquer, stains and paint to surfaces and polishing and waxing finished surfaces
- fitting and fastening frame pieces
- mounting backing materials and subjects for framing

Occupations:

- 394211 Furniture Finisher
- 394212 Picture Framer
- 394215 Wood Machinist
- 394214 Wood Turner
- 394299 Wood Machinists and Other Wood Trades Workers nec

394211 FURNITURE FINISHER

Applies finishes, such as stain, lacquer, paint, oil and varnish, to furniture, and polishes and waxes finished furniture surfaces.

Skill Level: 3

Specialisation:

French Polisher

394212 PICTURE FRAMER

Cuts out and assembles mouldings to make picture frames, and frames paintings, photographs, needlework and other artwork.

Skill Level: 3

UNIT GROUP 3942 WOOD MACHINISTS AND OTHER WOOD TRADES WORKERS

continued

394213 WOOD MACHINIST

Cuts, planes, turns, shapes and sands wood stock to specifications.

Skill Level: 5

Specialisations:

- Automatic Profile Sander Operator
- Copy Lathe Operator
- Edge Bander Operator
- Jigsawer (Wood)
- Panel Saw Operator
- Woodworking Machine Setter

394214 WOOD TURNER

Operates wood turning lathes to turn and shape wood stock.

Skill Level: 5

394299 WOOD MACHINISTS AND OTHER WOOD TRADES WORKERS NEC

This occupation group covers Wood Machinists and Wood Trades Workers not elsewhere classified.

Skill Level: 5

Occupations in this group include:

- Cane Furniture Maker
- Cooper
- Wood Model Maker

MINOR GROUP 399 MISCELLANEOUS TECHNICIANS AND TRADES WORKERS

This minor group covers Technicians and Trades Workers not elsewhere classified.

It includes Boat Builders and Shipwrights, Chemical, Gas, Petroleum and Power Generation Plant Operators, Gallery, Library and Museum Technicians, Jewellers, Performing Arts Technicians, and Signwriters.

Indicative Skill Level

Most occupations in this minor group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Associate Degree, Advanced Diploma or Diploma, or at least three years of relevant experience (ANZSCO Skill Level 2); or

AQF Certificate III including at least two years of on-the-job training, or AQF Certificate IV, or at least three years of relevant experience (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Diploma, or at least three years of relevant experience (ANZSCO Skill Level 2); or

NZ Register Level 4 qualification, or at least three years of relevant experience (ANZSCO Skill Level 3)

In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Occupations in this minor group are classified into the following unit groups:

- 3991 Boat Builders and Shipwrights
- 3992 Chemical, Gas, Petroleum and Power Generation Plant Operators
- 3993 Gallery, Library and Museum Technicians
- 3994 Jewellers
- 3995 Performing Arts Technicians
- 3996 Signwriters
- 3999 Other Miscellaneous Technicians and Trades Workers

UNIT GROUP 3991 BOAT BUILDERS AND SHIPWRIGHTS

BOAT BUILDERS AND SHIPWRIGHTS construct, fit out and repair boats and ships.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate III including at least two years of on-the-job training, or AQF Certificate IV (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 3)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Registration or licensing may be required.

Tasks include:

- studying plans and specifications, and preparing templates and scale plans for fabrication and cutting of hull sections
- marking reference points and lines on dry docks and slipways
- checking position and functioning of slipway apparatus
- assembling shells of boats and erecting hull sections of ship
- erecting and preparing launching platforms, conducting pre-launch tests and supervising launching procedures
- installing masts, frames, decking, fittings, machines, shafts and safety equipment
- building and installing structures such as cabins, machine mountings, propeller supports and rudders
- determining repair requirements and procedures
- may make hull moulds and fabricate and repair vessels using materials such as aluminium, wood, glass, reinforced plastics, carbon fibre, Kevlar, fibreglass and concrete

Occupations:

399111 Boat Builder and Repairer

399112 Shipwright

399111 BOAT BUILDER AND REPAIRER

Builds, repairs and modifies boats. Registration or licensing may be required.

Skill Level: 3**Specialisations:**

Composite Boat Builder

Rigger (Boat)

Spurmaker

Wooden Boat Builder

Yacht Builder

MAJOR GROUP 3 *continued*

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UNIT GROUP 3991 BOAT BUILDERS AND SHIPWRIGHTS *continued*

399112 SHIPWRIGHT

Constructs, fits out and repairs ships. Registration or licensing is required.

Skill Level: 5

Specialisations:

 Tollman/woman (Marine)

 Ship's Carpenter

**UNIT GROUP 3992 CHEMICAL, GAS, PETROLEUM AND POWER GENERATION
PLANT OPERATORS**

CHEMICAL, GAS, PETROLEUM AND POWER PLANT OPERATORS control the operation of chemical production equipment, pump gas and oil from wellheads, refine and process petroleum products, and operate boilers, turbogenerators and associated plant to generate electrical power.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate III including at least two years of on-the-job training, or AQF Certificate IV (ANZSCO Skill Level 3)

In New Zealand:

NZ Register Level 4 qualification (ANZSCO Skill Level 3)

At least three years of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Registration or licensing may be required.

Tasks include:

- controlling equipment performing continuous and batch processes to process chemicals and natural gas, manufacture refined petroleum products, and blend petroleum base stocks to produce commercial fuels, lubricating oils and asphalt
- controlling the preparation, measuring and feeding of raw material and processing agents such as catalysts and filtering media into plant
- patrolling and inspecting equipment to ensure proper operation and setting operating controls on equipment
- analysing samples and readings and recording test data
- controlling records of production, quantities transferred and details of blending and pumping operations
- checking equipment for malfunctions and arranging maintenance
- operating power generation plant controls to produce required load
- monitoring operation of power generation plant and interpreting instrument readings
- authorising procedures to isolate high-voltage and low-voltage electrical apparatus and plant
- writing reports and maintaining records on equipment performance, instrument readings and switching operations
- carrying out routine operating tests

Occupations:

399211 Chemical Plant Operator

399212 Gas or Petroleum Operator

399215 Power Generation Plant Operator

**UNIT GROUP 3992 CHEMICAL, GAS, PETROLEUM AND POWER GENERATION
PLANT OPERATORS** *continued*

399211 CHEMICAL PLANT OPERATOR

Controls the operation of chemical production plant.

Skill Level 3

Specialisations:

- Chemicals Distiller
- Chemicals Fermentation Operator
- Industrial Gas Production Operator
- Paint Maker
- Pharmaceutical Plant Operator
- Pilot Plant Operator

399212 GAS OR PETROLEUM OPERATOR

Alternative Titles:

- Oil and Gas Well Treatment Operator
- Oil, Gas and Pipe Tester
- Petroleum and Gas Refining and Pumping Operator

Operates equipment to pump oil and gas from wellheads, and refine and process petroleum products.

Skill Level 3

Specialisations:

- Gas Compressor Turbine Operator
- Petroleum Blending Plant Operator
- Petroleum Terminal Plant Operator
- Refinery Pipeline Operator

399213 POWER GENERATION PLANT OPERATOR

Operates boilers, turbogenerators and associated plant to generate electrical power. Registration or licensing is required.

Skill Level 3

Specialisations:

- Hydro-electric Station Operator
- Power Generation Turbine Room Operator

SUB-MAJOR GROUP 71 MACHINE AND STATIONARY PLANT OPERATORS

MACHINE AND STATIONARY PLANT OPERATORS operate stationary machines to process, manufacture, treat and finish a range of products, and perform activities such as extracting, loading, unloading, moving, placing, controlling, storing and measuring materials and equipment.

Indicative Skill Level

Most occupations in this sub-major group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

MQF Certificate II or III (ANZSCO Skill Level 4)

In New Zealand:

NZ Register Level 2 or 3 qualification (ANZSCO Skill Level 4)

At least one year of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks include:

- setting up, starting, controlling and stopping machines and plant
- monitoring machines and plant and adjusting controls to regulate operation and quality of output
- cleaning and performing minor repairs to machines and plant
- checking machines and plant to ensure safe operations

Occupations in this sub-major group are classified into the following minor groups:

- 711 Machine Operators
- 712 Stationary Plant Operators

MINOR GROUP 711 MACHINE OPERATORS

MACHINE OPERATORS operate stationary machines to process, manufacture, treat and finish a range of products.

Indicative Skill Level:

Most occupations in this minor group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate II or III (ANZSCO Skill Level 4)

In New Zealand:

NZ Register Level 2 or 3 qualification (ANZSCO Skill Level 4)

At least one year of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks include:

- fixing attachments to machines, setting controls and loading material to be processed
- starting machines, observing operation and adjusting controls to regulate temperature, pressure, intake of raw materials and speed
- sampling output for defects and variations, and adjusting machine settings accordingly
- unloading and storing output
- cleaning and lubricating machines and performing minor repairs

Occupations in this minor group are classified into the following unit groups:

- 7111 Clay, Concrete, Glass and Stone Processing Machine Operators
- 7112 Industrial Spraypainters
- 7115 Paper and Wood Processing Machine Operators
- 7114 Photographic Developers and Printers
- 7115 Plastics and Rubber Production Machine Operators
- 7116 Sewing Machinists
- 7117 Textile and Footwear Production Machine Operators
- 7119 Other Machine Operators

**UNIT GROUP 7111 CLAY, CONCRETE, GLASS AND STONE PROCESSING
MACHINE OPERATORS**

CLAY, CONCRETE, GLASS AND STONE PROCESSING MACHINE OPERATORS operate machines to manufacture and finish a variety of clay, concrete, glassware and stone products by extruding, shaping, mixing, grinding, cutting and other processes.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

MQF Certificate II or III (ANZSCO Skill Level 4)

In New Zealand:

NZ Register Level 2 or 3 qualification (ANZSCO Skill Level 4)

At least one year of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks include:

- monitoring the flow of clay and other raw materials and products into machines, and adjusting valves and controls to specifications
- positioning clay and stone on machines to be cut and worked
- operating concrete mixing, stacking and splitting machines
- setting up and installing moulds and other machine fixtures
- setting up and operating glass-making machines to produce molten glass, and regulating temperature of molten glass
- pressing and blowing glass into moulds to form glassware products
- collecting and examining samples for conformity to specifications and adjusting machine settings accordingly
- setting grinding and cutting edges
- using hand tools to cut, inscribe and polish roughly hewn stone to finished condition

Occupations:

- 711111 Clay Products Machine Operator
- 711112 Concrete Products Machine Operator
- 711115 Glass Production Machine Operator
- 711114 Stone Processing Machine Operator
- 711199 Clay, Concrete, Glass and Stone Processing Machine Operators nec.

711111 CLAY PRODUCTS MACHINE OPERATOR

Operates machines to manufacture clay products, such as bricks, tiles, insulators, porcelain and pottery, by shaping and firing clay.

Skill Level: 4

Specialisations:

- Brick Extruder Operator
- Porcelain Turner
- Slip Caster

**UNIT GROUP 7111 CLAY, CONCRETE, GLASS AND STONE PROCESSING
MACHINE OPERATORS** *continued*

711112 CONCRETE PRODUCTS MACHINE OPERATOR

Operates machines to manufacture moulded concrete products such as concrete pipes and fittings, concrete railway sleepers, concrete bricks, tiles and paving blocks, structural beams, building panels and cast products.

Skill Level: 4

Specialisations:

- Concrete Pipe Machine Operator
- Concrete Precast Moulder
- Concrete Tile Machine Operator

711113 GLASS PRODUCTION MACHINE OPERATOR

Operates machines to manufacture molten glass and shape glassware products such as containers, sheet glass, structural and stained glass, glass lenses and prisms.

Skill Level: 4

Specialisations:

- Glass Furnace Operator
- Glass Laminating Operator
- Glass Maker
- Glass Melt Operator
- Glass Toughening Operator
- Glassware Maker

711114 STONE PROCESSING MACHINE OPERATOR

Operates machines to cut and finish stones for tiles, building blocks and facings.

Skill Level: 4

Specialisations:

- Marble Cutter
- Stone Polisher
- Stone Sawyer

711199 CLAY, CONCRETE, GLASS AND STONE PROCESSING MACHINE OPERATORS NEC

This occupation group covers Clay, Concrete, Glass and Stone Processing Machine Operators not elsewhere classified.

Skill Level: 4

Occupations in this group include:

- Abasive Wheel Maker
- Brake Lining Slaker
- Flint Cement Moulder
- Plaster Caster
- Plaster Machine Operator

UNIT GROUP 7112 INDUSTRIAL SPRAYPAINTERS

INDUSTRIAL SPRAYPAINTERS operate spray painting equipment to paint and apply other industrial coatings to manufactured items.

Vehicle Painters are excluded from this unit group. Vehicle Painters are included in Unit Group 5245 Vehicle Painters.

Indicative Skill Level:

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate II or III (ANZSCO Skill Level 4)

In New Zealand:

NZ Register Level 2 or 3 qualification (ANZSCO Skill Level 4)

At least one year of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks include:

- grinding, sanding and cleaning surfaces of items to be painted
- loading paint, oil, lacquer, varnish and rustproofing agents into spray equipment
- connecting hoses to spray equipment and adjusting spray nozzles to required pressure
- securing items to be sprayed within spray booths or placing them onto conveyors
- directing spray guns to apply even coatings
- moving items to drying areas and stacking them for further painting and packaging
- starting and monitoring extractor and drying fans, and heaters
- cleaning nozzles, containers and hoses of equipment
- may operate paint dipping baths
- may mix coating solutions and regulate their temperature

Occupation:

711211 Industrial Spraypainter

T11211 INDUSTRIAL SPRAYPAINTER

Operates spray painting equipment to paint and apply other industrial coatings to manufactured items.

Skill Level: 4**Specialisations:**

Powder Coater
Rust Proofers

UNIT GROUP 7113 PAPER AND WOOD PROCESSING MACHINE OPERATORS

PAPER AND WOOD PROCESSING MACHINE OPERATORS operate machines to manufacture paper packaging and other paper products, fibreboard stock, logs, plywood, particle board, solid laminate and similar timber products.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

MQF Certificate II or III (ANZSCO Skill Level 4)

In New Zealand:

NZ Register Level 2 or 3 qualification (ANZSCO Skill Level 4)

At least one year of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks include:

- setting up printing plates, ink circulation systems, knives, creases, cutting dies, and folding and gluing machines
- loading machines with paper and fibreboard
- operating machines to form cardboard containers, paper plates, egg cartons, tissue paper and other paper products
- adjusting and clearing machines and performing minor repairs
- securing timber into place and setting saws to produce specified sizes of plank and board to be cut
- starting machines and feeding stock onto cutting saw, and operating automatic feed mechanisms
- raising and lowering saws to trim boards and remove defects such as rot and splits
- controlling lathes and slicing machines to produce veneers, and laminating veneer using glue
- verifying dimensions of cut stock and accuracy of cuts
- checking saws and other machines for safety, sharpness and correct functioning

Occupations:

- 711511 Paper Products Machine Operator
- 711512 Wood Processing Machine Operator

711311 PAPER PRODUCTS MACHINE OPERATOR

Operates machines to manufacture paper packaging and other products from paper and fibreboard stock.

*Skill Level: 4**Specialisations:*

- Carton Making Machinist
- Embosser
- Paper Bag Making Machinist

UNIT GROUP 7113 PAPER AND WOOD PROCESSING MACHINE OPERATORS

continued

711312 WOOD PROCESSING MACHINE OPERATOR

Operates sawing, rolling, pressing and other machines to manufacture logs, timber poles and pieces, plywood, particle board, solid laminate and similar products.

Skill Level: 4

Specialisations:

- Band Saw Operator
- Beam Saw Operator
- Cart Gang Sawyer
- Debarker Operator
- Docking Saw Operator
- Log Preparer
- Plywood and Veneer Repairer
- Resawyer
- Ripsaw Operator
- Sawmill Moulder Operator
- Veneer Production Machine Operator

UNIT GROUP 7114 PHOTOGRAPHIC DEVELOPERS AND PRINTERS

PHOTOGRAPHIC DEVELOPERS AND PRINTERS edit and adjust digital images, develop photographic film, and print photographic images from digital media, negatives and positives using computer software, fully automatic equipment and by separate processes.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

MQF Certificate II or III (ANZSCO Skill Level 4)

In New Zealand:

NZ Register Level 2 or 3 qualification (ANZSCO Skill Level 4)

At least one year of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks include:

- cropping images and adjusting colour, brightness and contrast
- preparing exposed film for different processing batches in dark rooms and dark chambers
- adjusting settings and running automatic developing equipment
- inspecting prints and adjusting settings on print-making equipment to produce required number, size and type of prints
- scanning images onto electronic media
- checking and replenishing chemicals and water supply for chemical and water baths required to produce negative and positive prints
- monitoring and testing photographic processing and printing equipment, and maintaining operational standards
- may prepare chemical solutions for different techniques and effects
- may develop black and white images by separate processes and operate enlargers
- may develop motion picture film

Occupation:

711411 Photographic Developer and Printer

711411 PHOTOGRAPHIC DEVELOPER AND PRINTER

Edits and adjusts digital images, develops photographic film, and prints photographic images from digital media, negatives and positives using computer software, fully automatic equipment and by separate processes.

*Skill Level: 4**Specialisations:*

Copy Camera Operator
Dark Room Attendant
Digital Photographic Printer
Film Process Operator
Minilab Operator
Photographic Enlarger Operator
Silver Recovery Operator (*Ann*)
Slide Developer

UNIT GROUP 7115 PLASTICS AND RUBBER PRODUCTION MACHINE OPERATORS

PLASTICS AND RUBBER PRODUCTION MACHINE OPERATORS operate machines to manufacture and finish plastic and rubber products.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

MQF Certificate II or III (ANZSCO Skill Level 4)

In New Zealand:

NZ Register Level 2 or 3 qualification (ANZSCO Skill Level 4)

At least one year of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks include:

- operating controls to regulate temperature, pressure, speed and flow of operation
- measuring and loading materials, items and ingredients for mixing into machines and feeding mechanisms
- monitoring operation, regulating material supply and adding chemicals and colorants to mixture
- threading uncoated wire and cable through plastic coating machines, around take-up reels and through dies and cooling chambers
- laying casings, beads, ply and rubber sheets on moulds
- operating rollers to remove air
- operating vulcaniser presses and controlling curing
- examining output for defects and conformity to specifications
- performing minor repairs and maintaining production records

Occupations:

- 711511 Plastic Cablemaking Machine Operator
- 711512 Plastic Compounding and Reclamation Machine Operator
- 711515 Plastics Fabricator or Welder
- 711514 Plastics Production Machine Operator (General)
- 711515 Reinforced Plastic and Composite Production Worker
- 711516 Rubber Production Machine Operator
- 711599 Plastics and Rubber Production Machine Operators nec

711511 PLASTIC CABLEMAKING MACHINE OPERATOR

Operates extruding machines to encase wire, cord, cable and optic fibre in plastic or rubber.

Skill Level: 4

Specialisations:

- Insulation Extruder Operator
- Optic Fibre Drawer
- Wire Drawer (Plastics)

UNIT GROUP 7115 PLASTICS AND RUBBER PRODUCTION MACHINE OPERATORS *continued*

T11512 PLASTIC COMPOUNDING AND RECLAMATION MACHINE OPERATOR

Operates mixing and grinding machines to prepare plastic powders and liquid blends, and recycle waste plastic materials from factory operations.

Skill Level: 4

Specialisations:

- Pelletising Extruder Operator
- Powder Hand (Plastics)
- Shredder/Granulator Operator

T11513 PLASTICS FABRICATOR OR WELDER

Operates machines to measure, cut, shape, fit and assemble plastics materials to produce plastic products.

Skill Level: 4

Specialisations:

- Acrylic Fabricator
- Vinyl Welder and Fabricator

T11514 PLASTICS PRODUCTION MACHINE OPERATOR (GENERAL)

Operates extruding, injection moulding and blow moulding machines to produce finished plastic products.

Skill Level: 4

Specialisations:

- Blow Moulding Machine Operator
- Extruding Machine Operator (Plastics)
- Injection Moulding Machine Operator (Plastics)
- Lamination Machine Operator
- Plastic Production Machine Setter

T11515 REINFORCED PLASTIC AND COMPOSITE PRODUCTION WORKER

Operates machines to apply gelcoat, colouring and fibre reinforced plastic to moulds to produce fibreglass and laminated products.

Skill Level: 4

Specialisations:

- Fibreglass Gun Hand
- Fibreglass Hand Laminator
- Resin Transfer Moulding Machine Operator

UNIT GROUP 7115 PLASTICS AND RUBBER PRODUCTION MACHINE OPERATORS *continued*

711516 RUBBER PRODUCTION MACHINE OPERATOR

Operates machines to manufacture rubber products such as tyres.

Skill Level: 4

Specialisations:

- Rubber Belt Splicer
- Rubber Compounder
- Rubber Extrusion Machine Operator
- Rubber Knitting and Reinforcing Machine Operator
- Rubber Moulding Machine Operator
- Rubber Roller Grinder Operator
- Tyre Builder
- Tyre Retreader

711599 PLASTICS AND RUBBER PRODUCTION MACHINE OPERATORS NEC

This occupation group covers Plastics and Rubber Production Machine Operators not elsewhere classified.

Skill Level: 4

Occupations in this group include:

- Rotational Moulding Operator (Plastics)
- Thermofforming Machine Operator

UNIT GROUP 7119 OTHER MACHINE OPERATORS

This unit group covers Machine Operators not elsewhere classified.

It includes Chemical Production Machine Operators, Motion Picture Projectionists, Sand Blasters and Sterilisation Technicians.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

MQF Certificate II or III (ANZSCO Skill Level 4)

In New Zealand:

NZ Register Level 2 or 3 qualification (ANZSCO Skill Level 4)

At least one year of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Occupations:

711911 Chemical Production Machine Operator

711912 Motion Picture Projectionist

711915 Sand Blaster

711914 Sterilisation Technician

711999 Machine Operators nec

711911 CHEMICAL PRODUCTION MACHINE OPERATOR

Operates machines to produce chemical goods such as soaps, detergents, pharmaceuticals, toiletries and explosives.

Skill Level: 4

Specialisations:

Bullet Maker

Candle Maker

Cosmetics Machine Operator

Explosives Mixer Operator

Nitrocellulose Maker

Paint Tinner

Tablet Making Machine Operator

711912 MOTION PICTURE PROJECTIONIST

Operates film projection and related sound reproduction equipment.

Skill Level: 4

711913 SAND BLASTER

Operates sandblasting machines to clean and grind metal products and other hard surfaces.

Skill Level: 4

MAJOR GROUP 7 *continued*

UNIT GROUP 7119 OTHER MACHINE OPERATORS *continued*

711914 STERILISATION TECHNICIAN

Cleans, sterilises and packages surgical instruments and other hospital equipment, soft goods and linen in a sterilisation service facility.

Skill Level: 4

711999 MACHINE OPERATORS NEC

This occupation group covers Machine Operators not elsewhere classified.

Skill Level: 4

Occupations in this group include:

- Asbestos Remover
- Brush Maker
- Film Canner
- Film Spooler
- Insolent Maker
- Pressurised Container Filler
- Remotely Operated Vehicle (ROV) Pilot
- Sideshow Ride Operator
- Venetian Blind Machine Operator

MINOR GROUP 712 STATIONARY PLANT OPERATORS

STATIONARY PLANT OPERATORS operate stationary plant to perform a range of activities such as extracting minerals from the earth, refining and treating metals and mineral ore, and producing basic metal products; lifting, moving and placing materials and equipment; and loading and stacking bulk materials.

Indicative Skill Level

Most occupations in this minor group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

MQF Certificate II or III (ANZSCO Skill Level 4)

In New Zealand:

NZ Register Level 2 or 3 qualification (ANZSCO Skill Level 4)

At least one year of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks include:

- fixing attachments to plant and setting controls prior to operation
- manipulating controls to move materials between process phases
- observing operation and adjusting controls to regulate temperature, pressure, mix of materials to be processed and handled, and speed of operation
- monitoring operation of plant directly or by referring to instruments ensuring safe operation
- cleaning and lubricating plant, repairing minor defects and reporting major problems
- unloading and storing output

Occupations in this minor group are classified into the following unit groups:

- 7121 Crane, Hoist and Lift Operators
- 7122 Drillers, Miners and Shot Firers
- 7125 Engineering Production Systems Workers
- 7129 Other Stationary Plant Operators

UNIT GROUP 7121 CRANE, HOIST AND LIFT OPERATORS

CRANE, HOIST AND LIFT OPERATORS operate stationary and mobile cranes, hoists, lifts and winches to lift, move and place materials, equipment and people in areas such as building sites, factories, mines, sawmills, wharves and shipyards.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

MQF Certificate II or III (ANZSCO Skill Level 4)

In New Zealand:

NZ Register Level 2 or 3 qualification (ANZSCO Skill Level 4)

At least one year of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Registration or licensing is required.

Tasks include:

- testing the operation of plant before use to ensure safety
- operating controls to rotate cranes, move cranes on fixed rails, raise and lower jibs and booms, and raise, lower and move hooks and objects
- working in conjunction with Construction Riggers and Crane Chasers to position hooks and raise, move and place loads
- controlling the movement of loads, and monitoring speed, acceleration and braking distances directly and by signalling to other operators
- monitoring plant operation, instruments and gauges to detect malfunctions and problems
- lubricating ropes and winches on cranes and replacing worn cables
- may operate cranes fitted with attachments for purposes such as demolition and pile driving
- may operate overhead cranes using hand controls suspended by cables from cranes

Occupation:

712111 Crane, Hoist or Lift Operator

712111 CRANE, HOIST OR LIFT OPERATOR

Operates stationary and mobile cranes, hoists, lifts and winches to lift, move and place materials, equipment and people in areas such as building sites, factories, mines, sawmills, wharves and shipyards. Registration or licensing is required.

Skill Level: 4**Specialisations:**

Braceperson
Cantilever Operator
Cherry Picker Operator
Elevated Work Platform Operator
Pile Driver
Portainer Operator
Tower Crane Operator
Winch Operator
Winding Engine Driver

UNIT GROUP 7122 DRILLERS, MINERS AND SHOT FIRERS

DRILLERS, MINERS AND SHOT FIRERS assemble, position and operate drilling rigs and mining plant, and detonate explosives to extract materials from the earth and demolish structures.

Indicative Skill Level:

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate II or III (ANZSCO Skill Level 4)

In New Zealand:

NZ Register Level 2 or 3 qualification (ANZSCO Skill Level 4)

At least one year of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Registration or licensing may be required.

Tasks include:

- dismantling, moving and reassembling drilling rigs and accessory plant
- taking samples of ore, liquids and gases and packaging them
- performing minor maintenance and repairs, and lubricating and clearing plant
- recording performance details and information obtained from wells, and keeping logs detailing operations
- operating surface and underground mining plant
- undertaking development work such as opening up new shafts, drives, air vents, rises and crib rooms
- positioning explosives in bore holes and priming explosives using detonators and explosive cartridges
- connecting wires, fuses and detonating cords to explosive cartridges and detonators, and detonating explosives
- monitoring operation of plant and ensuring safety of other workers on mining sites and during drilling operations
- operating auxiliary plant such as pumps to expel air, water and mud

Occupations:

712211 Driller

712212 Miner

712215 Shot Firer

UNIT GROUP 7122 DRILLERS, MINERS AND SHOT FIRERS *continued*

T12211 DRILLER

Alternative Title:

Drilling Plant Operator

Assembles, positions and operates a drilling rig and related equipment to extract ore, liquids or gases from the earth. Registration or licensing may be required.

Skill Level: 4

Specialisations:

Development Driller

Directional Driller

Exploration Driller

Jumbo Operator

Power Tongs Operator

Raise Drill Operator

Rig Manager

Rock Drill Operator

Scope Miner

Tool Pusher

T12212 MINER

Alternative Title:

Mining Plant Operator

Operates plant to excavate, load and transport coal, ore and rock in an underground or open-cut mine. Registration or licensing may be required.

Skill Level: 4

Specialisations:

Bagger Operator

Coal Cutter

Dragline Operator

Opal Miner

Underground Truck Operator

T12213 SHOT FIRER

Alternative Title:

Powder Monkey (Aus)

Assembles, positions and detonates explosives at a mining or demolition site. Registration or licensing may be required.

Skill Level: 4

Specialisation:

Seismograph Shooter

UNIT GROUP 7123 ENGINEERING PRODUCTION SYSTEMS WORKERS

ENGINEERING PRODUCTION SYSTEMS WORKERS perform a range of production process tasks to refine and treat metals and mineral ore, fire ceramics, and operate plant to produce and finish metal products such as rods, tubing and structural shapes, and moulds for casting.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

MQF Certificate II or III (ANZSCO Skill Level 4)

In New Zealand:

NZ Register Level 2 or 3 qualification (ANZSCO Skill Level 4)

At least one year of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Registration or licensing is required.

Tasks include:

- interpreting engineering production drawings
- setting up, operating and adjusting production plant to shape metal stock and castings and cut sheet metal
- operating welding and electroplating plant
- operating furnaces and quenching plant to smelt and change the structure of metals
- using kilns and ovens to fire ceramics
- processing mineral ore and operating metal rolling plant
- casting molten metal and operating plant to draw metal wire through dies
- operating computer-controlled production plant

Occupation:

712511 Engineering Production Systems Worker

712313 ENGINEERING PRODUCTION SYSTEMS WORKER

Performs a range of production process tasks to refine and treat metals and mineral ore, fire ceramics, and operate plant to produce and finish metal products such as rods, tubing and structural shapes, and moulds for casting. Registration or licensing is required.

Skill Level: 4**Specialisations:**

Alumina Refinery Operator
Arc Welder
Brake Press Operator
Computer Numeric Control Machine Operator
Foundry Operator
Furnace Operator (Metals)
Kiln Operator (Metals)
Metal Rolling Mill Operator
Mineral Ore Treatment Plant Operator
Sheetmetal Worker (Second Class)
Tool Setter
Turner Punch Operator

UNIT GROUP 7129 OTHER STATIONARY PLANT OPERATORS

This unit group covers Stationary Plant Operators not elsewhere classified.

It includes Boiler or Engine Operators, Bulk Materials Handling Plant Operators, Cement Production Plant Operators, Concrete Batching Plant Operators, Concrete Pump Operators, Paper and Pulp Mill Operators, Railway Signal Operators, Train Controllers, Waste Water or Water Plant Operators and Weighbridge Operators.

Indicative Skill Level:

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate II or III (ANZSCO Skill Level 4)

In New Zealand:

NZ Register Level 2 or 3 qualification (ANZSCO Skill Level 4)

At least one year of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Registration or licensing may be required.

Occupations:

- 712911 Boiler or Engine Operator
- 712912 Bulk Materials Handling Plant Operator
- 712913 Cement Production Plant Operator
- 712914 Concrete Batching Plant Operator
- 712915 Concrete Pump Operator
- 712916 Paper and Pulp Mill Operator
- 712917 Railway Signal Operator
- 712918 Train Controller
- 712921 Waste Water or Water Plant Operator
- 712922 Weighbridge Operator
- 712999 Stationary Plant Operators nec

712911 BOILER OR ENGINE OPERATOR

Operates and maintains stationary engines, boilers, refrigeration and airconditioning systems, and associated mechanical plant. Registration or licensing is required.

Skill Level: 4

Specialisations:

- Airconditioning Plant Operator
- Marine Engine Driver
- Motorman/woman (Fluids Drilling)
- Refrigeration Plant Operator

UNIT GROUP 7129 OTHER STATIONARY PLANT OPERATORS *continued*

T12912 BULK MATERIALS HANDLING PLANT OPERATOR

Operates plant to load, unload, move, store and stack bulk materials such as grain, sugar and mineral ore.

Skill Level 4

Specialisations:

- Bulk Fluids Handler
- Conveyor Belt Operator
- Grain Handler
- Palletiser Operator
- Tank Farm Operator (Petrochemical)

T12913 CEMENT PRODUCTION PLANT OPERATOR

Operates plant to produce cement, lime and clinker.

Skill Level 4

Specialisations:

- Cement Crusher Operator
- Cement Despatch Operator
- Cement Grinding Mill Operator
- Cement Kiln Operator

T12914 CONCRETE BATCHING PLANT OPERATOR

Operates mixing plant to produce batches of concrete from cement, sand, aggregate, water and other ingredients.

Skill Level 4

Specialisation:

- Premix Concrete Batcher

T12915 CONCRETE PUMP OPERATOR

Operates plant to pump, cast and mould concrete. Registration or licensing is required.

Skill Level 4

Specialisation:

- Concrete Boom Operator

UNIT GROUP 7129 OTHER STATIONARY PLANT OPERATORS *continued*

T12916 PAPER AND PULP MILL OPERATOR

Alternative Titles:

- Paper Machine Operator
- Paper Maker

Operates plant to produce paper pulp from woodchips and to make paper sheets.

Skill Level: 4

Specialisations:

- Bleach Plant Operator
- Dryman/woman (Paper Mill)
- Foundry Machine Operator
- Interform Machine Operator
- Paperboard Machine Operator
- Paper Rewinder Operator
- Supercalender Operator (Papermaking)

T12917 RAILWAY SIGNAL OPERATOR

Alternative Title:

- Railway Switching and Signaling Operator

Controls the movement of trains, and assembles and disassembles trains within a marshaling yard.

Skill Level: 4

Specialisations:

- Railway Shunter
- Railway Yard Assistant

T12918 TRAIN CONTROLLER

Oversees the safe movement of trains using a computerised train control signaling system.

Skill Level: 4

T12921 WASTE WATER OR WATER PLANT OPERATOR

Operates plant to store, distribute and treat water including purifying water for human consumption and removing wastes from sewage.

Skill Level: 4

T12922 WEIGHBRIDGE OPERATOR

Operates weighing plant and issues measurement tickets which provide readings of vehicle and livestock weight.

Skill Level: 4

Specialisation:

- Licensed Weigher

MAJOR GROUP 7 *continued*

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UNIT GROUP 7129 OTHER STATIONARY PLANT OPERATORS *continued*

712999 STATIONARY PLANT OPERATORS NEC

This occupation group covers Stationary Plant Operators not elsewhere classified.

Skill Level 4

Occupations in this group include:

- Air Compressor Operator
- Beverage Distiller
- Briquet Plant Operator
- Car Compactor Operator
- Crematorium Operator
- Lock Master (Water Transport)
- Oilseed Processing Operator
- Snow Maker
- Timber Treatment Plant Operator
- Wash Plant Operator

SUB-MAJOR GROUP 72 MOBILE PLANT OPERATORS

MOBILE PLANT OPERATORS operate mobile plant to clear and cultivate land, sow and harvest crops, fell trees, move and excavate rock and soil, move pallets and containers, and lay roads and railway tracks.

Indicative Skill Level:

Most occupations in this sub-major group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate II or III (ANZSCO Skill Level 4)

In New Zealand:

NZ Register Level 2 or 3 qualification (ANZSCO Skill Level 4)

At least one year of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks include:

- driving plant to work site
- driving and manoeuvring plant on site
- selecting and fitting attachments to plant
- manipulating controls to operate attachments mechanically, hydraulically and electrically, and to move materials
- monitoring operation of plant directly and by referring to instruments
- monitoring condition of plant, performing minor repairs and reporting mechanical faults

Occupations in this sub-major group are classified into the following minor group:

721 Mobile Plant Operators

MINOR GROUP 721 MOBILE PLANT OPERATORS

MOBILE PLANT OPERATORS operate mobile plant to clear and cultivate land, sow and harvest crops, fell trees, move and excavate rock and soil, move pallets and containers, and lay roads and railway tracks.

Indicative Skill Level:

Most occupations in this minor group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate II or III (ANZSCO Skill Level 4)

In New Zealand:

NZ Register Level 2 or 3 qualification (ANZSCO Skill Level 4)

At least one year of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks include:

- driving plant to worksite
- driving and manoeuvring plant on site
- selecting and fitting attachments to plant
- manipulating controls to operate attachments mechanically, hydraulically and electrically, and to move materials
- monitoring operation of plant directly and by referring to instruments
- monitoring condition of plant, performing minor repairs and reporting mechanical faults

Occupations in this minor group are classified into the following unit groups:

- 7211 Agricultural, Forestry and Horticultural Plant Operators
- 7212 Earthmoving Plant Operators
- 7215 Forklift Drivers
- 7219 Other Mobile Plant Operators

UNIT GROUP 7212 EARTHMOVING PLANT OPERATORS

EARTHMOVING PLANT OPERATORS operate plant to excavate earth, ore and rock, break up pavement, road, rock and obstructions, move and load earth, rock and debris, and level, smooth and compact surfaces in construction and other projects.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

MQF Certificate II or III (ANZSCO Skill Level 4)

In New Zealand:

NZ Register Level 2 or 3 qualification (ANZSCO Skill Level 4)

At least one year of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Registration or licensing is required.

Tasks include:

- preparing and positioning plant for operation
- selecting, fitting and removing attachments such as buckets, winches, loading scoops, shovel blades and rock breaking hammers
- operating controls to excavate, break, drill, level, compact, gouge out, move, load and spread earth, rock, rubble, soil and other materials
- monitoring operation of plant and adjusting controls to regulate pressure, speed and flow of operation, and ensuring safety of other workers
- raising, lowering and manipulating attachments using manual and hydraulic controls
- working from drawings, markers and verbal instructions
- servicing, lubricating, cleaning and refuelling plant and performing minor adjustments and repairs

Occupations:

- 721211 Earthmoving Plant Operator (General)
- 721212 Backhoe Operator
- 721215 Bulldozer Operator
- 721216 Excavator Operator
- 721215 Grader Operator
- 721216 Loader Operator

T21211 EARTHMOVING PLANT OPERATOR (GENERAL)*Alternative Title*

Construction Plant Operator (General)

Operates a range of earthmoving plant to assist with building roads, rail, water supply, dams, treatment plants and agricultural earthworks. Registration or licensing is required.

Skill Level: 4

MAJOR GROUP 7 *continued*

UNIT GROUP 7212 EARTHMOVING PLANT OPERATORS *continued*

T21212 BACKHOE OPERATOR

Operates a backhoe and attachments to excavate, break, drill, level and compact earth, rock and other material. Registration or licensing is required.

Skill Level: 4

T21213 BULLDOZER OPERATOR

Operates a bulldozer using blades and other attachments to gouge out, level and move materials in construction, forestry, mining and other projects. Registration or licensing is required.

Skill Level: 4

Specialisations:

Scraper Operator (Earthmoving)

T21214 EXCAVATOR OPERATOR

Operates heavy excavation plant to excavate, move and load earth, rock and rubble. Registration or licensing is required.

Skill Level: 4

Specialisations:

Hydraulic Rockbreaker Operator

Trench Digging Machine Operator

T21215 GRADER OPERATOR

Operates a grader to spread and level materials in construction projects. Registration or licensing is required.

Skill Level: 4

T21216 LOADER OPERATOR

Operates a motorised loader to move and load soil, rock and other material. Registration or licensing is required.

Skill Level: 4

Specialisations:

Bobcat Operator

Front-end Loader Operator

UNIT GROUP 7213 FORKLIFT DRIVERS

FORKLIFT DRIVERS operate forklifts to move bulk materials, containers, crates, palletised goods, cartons and bales.

Indicative Skill Level:

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate II or III (ANZSCO Skill Level 4)

In New Zealand:

NZ Register Level 2 or 3 qualification (ANZSCO Skill Level 4)

At least one year of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Registration or licensing may be required.

Tasks include:

- operating controls to align forklifts and raise and lower forks to stack and unstack items in warehouses, factories, timber yards and shipping terminals
- operating forklifts which run on rails or use electronic guidance systems to control movements in narrow aisles
- transporting goods to designated areas in warehouses, factories, timber yards and shipping terminals
- ensuring goods are stored in correct areas so that they can be easily located when orders are made up
- monitoring equipment operation visually through gauges and instruments and through computerised monitoring equipment
- inspecting and controlling equipment to identify wear and damage
- servicing and performing minor repairs and adjustments to forklifts
- may operate specialised trucks to carry items beneath elevated frames

Occupation:

721511 Forklift Driver

T21311 FORKLIFT DRIVER**Alternative Titles:**

Forklift Operator
Fork Truck Operator

Operates a forklift to move bulk materials, containers, crates, palletised goods, cartons and bales. Registration or licensing may be required.

Skill Level: 4**Specialisation:**

Reach Truck Operator

UNIT GROUP 7219 OTHER MOBILE PLANT OPERATORS

This unit group covers Mobile Plant Operators not elsewhere classified.

It includes Aircraft Baggage Handlers and Airline Ground Crew, Linemarkers, Paving Plant Operators, Railway Track Plant Operators, Road Roller Operators and Streetsweeper Operators.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate II or III (ANZSCO Skill Level 4)

In New Zealand:

NZ Register Level 2 or 3 qualification (ANZSCO Skill Level 4)

At least one year of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Registration or licensing may be required.

Occupations:

- 721911 Aircraft Baggage Handler and Airline Ground Crew
- 721912 Linemarker
- 721913 Paving Plant Operator
- 721914 Railway Track Plant Operator
- 721915 Road Roller Operator
- 721916 Streetsweeper Operator
- 721999 Mobile Plant Operators nec

721911 AIRCRAFT BAGGAGE HANDLER AND AIRLINE GROUND CREW

Loads and unloads baggage, directs planes, positions staircases, fills aircraft fuel tanks and performs other aircraft ground services to ensure aircraft operations run efficiently. Registration or licensing is required.

Skill Level: 4

Specialisation:

Ramp Agent

721912 LINEMARKER

Operates plant to apply markings to roads and other surfaces such as car parks, airports and sportsgrounds. Registration or licensing is required.

Skill Level: 4

Specialisation:

Road Marker

721913 PAVING PLANT OPERATOR

Operates plant to spread and level hot bituminous paving materials and lay concrete on areas such as highways, roads and car parks. Registration or licensing is required.

Skill Level: 4

MAJOR GROUP 7 *continued*

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UNIT GROUP 7219 OTHER MOBILE PLANT OPERATORS *continued*

T21914 RAILWAY TRACK PLANT OPERATOR

Operates plant to lay, align, repair and maintain railway tracks. Registration or licensing may be required.

Skill Level 4

T21915 ROAD ROLLER OPERATOR

Operates a power-driven roller to prepare surfaces for roads, runways and car parks. Registration or licensing is required.

Skill Level 4

T21916 STREETSWEeper OPERATOR

Operates plant to clean streets and gutters of litter and debris. Registration or licensing is required.

Skill Level 4

T21999 MOBILE PLANT OPERATORS NEC

This occupation group covers Mobile Plant Operators not elsewhere classified. Registration or licensing may be required.

Skill Level 4

Occupations in this group include:

Cable Ferry Operator

Dredge Operator

Mulcher Operator

Snow Groomer

Saddle Carrier Operator

Tunnelling Plant Operator

SUB-MAJOR GROUP 74 STOREPERSONS

STOREPERSONS receive, handle and despatch goods in stores and warehouses.

Indicative Skill Level

Most occupations in this sub-major group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

MQF Certificate II or III (ANZSCO Skill Level 4)

In New Zealand:

NZ Register Level 2 or 3 qualification (ANZSCO Skill Level 4)

At least one year of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks include:

- receiving incoming goods, checking for damage and for discrepancies between goods and invoices
- unloading vehicles, opening packages and removing contents
- operating computers to obtain details of location and quantity of items in stock
- labelling goods with details of storage location
- packing and weighing goods and sealing boxes
- operating machines to lift, place and remove goods on high levels
- operating specialised equipment, such as manually and electronically guided order pickers, and checking goods off picking list
- assisting with regular stocktakes
- may use materials handling equipment, such as hydraulic pallet lifters and hand trucks, to move goods

Occupations in this sub-major group are classified into the following minor group:

741. Storepersons

MINOR GROUP 741 STOREPERSONS

STOREPERSONS receive, handle and despatch goods in stores and warehouses.

Indicative Skill Level

Most occupations in this minor group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

MQF Certificate II or III (ANZSCO Skill Level 4)

In New Zealand:

NZ Register Level 2 or 3 qualification (ANZSCO Skill Level 4)

At least one year of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks include:

- receiving incoming goods, checking for damage and for discrepancies between goods and invoices
- unloading vehicles, opening packages and removing contents
- operating computers to obtain details of location and quantity of items in stock
- labelling goods with details of storage location
- packing and weighing goods and sealing boxes
- operating machines to lift, place and remove goods on high levels
- operating specialised equipment, such as manually and electronically guided order pickers, and checking goods off picking list
- assisting with regular stocktakes
- may use materials handling equipment, such as hydraulic pallet lifters and hand trucks, to move goods

Occupations in this minor group are classified into the following unit group:

7411 Storepersons

UNIT GROUP 7411 STOREPERSONS

STOREPERSONS receive, handle and despatch goods in stores and warehouses.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

MQF Certificate II or III (ANZSCO Skill Level 4)

In New Zealand:

NZ Register Level 2 or 3 qualification (ANZSCO Skill Level 4)

At least one year of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks include:

- receiving incoming goods, checking for damage and for discrepancies between goods and invoices
- unloading vehicles, opening packages and removing contents
- operating computers to obtain details of location and quantity of items in stock
- labelling goods with details of storage location
- packing and weighing goods and sealing boxes
- operating machines to lift, place and remove goods on high levels
- operating specialised equipment, such as manually and electronically guided order pickers, and checking goods off picking list
- assisting with regular stocktakes
- may use materials handling equipment, such as hydraulic pallet lifters and hand trucks, to move goods

Occupation:

741111 Storeperson

741111 STOREPERSON

Alternative Titles:

Stores Assistant
Warehouse Assistant

Receives, handles and despatches goods in a store or warehouse.

Skill Level: 4

Specialisations:

Chiller Hand
Manufacturing Storeperson
Operator Supply (Army)
Order Picker/Assembler
Stores Despatch Hand
Stores Naval (Navy)

SUB-MAJOR GROUP 82 CONSTRUCTION AND MINING LABOURERS

CONSTRUCTION AND MINING LABOURERS perform a variety of routine tasks in house building, and road, rail and general construction, and in drilling, mining and mineral ore treatment, usually under close supervision.

Indicative Skill Level

Most occupations in this sub-major group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

- AQF Certificate II or III, or at least one year of relevant experience (ANZSCO Skill Level 4), or
- AQF Certificate I, or compulsory secondary education (ANZSCO Skill Level 5)

In New Zealand:

- NZ Register Level 2 or 3 qualification, or at least one year of relevant experience (ANZSCO Skill Level 4); or
- NZ Register Level 1 qualification, or compulsory secondary education (ANZSCO Skill Level 5)

In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification. In the case of some Skill Level 5 occupations, a short period of on-the-job training may be required in addition to or instead of the formal qualification, or no formal qualification or on-the-job training may be required.

Tasks include:

- loading and unloading construction materials and equipment, and transporting them around building sites
- mixing, spreading and levelling concrete, plaster and mortar
- laying out fence lines and lifting and positioning posts
- insulating buildings, pipes and ducting
- fitting awnings, security screens and other home improvements
- assembling and erecting scaffolding and rigging
- digging holes and trenches, and spreading, levelling and compacting soil, gravel, sand and ballast
- erecting and dismantling barricades
- directing cranes

Occupations in this sub-major group are classified into the following minor group:

- 821 Construction and Mining Labourers

MINOR GROUP 821 CONSTRUCTION AND MINING LABOURERS

CONSTRUCTION AND MINING LABOURERS perform a variety of routine tasks in house building, and road, rail and general construction, and in drilling, mining and mineral ore treatment, usually under close supervision.

Indicative Skill Level

Most occupations in this minor group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

- AQF Certificate II or III, or at least one year of relevant experience (ANZSCO Skill Level 4), or
- AQF Certificate I, or compulsory secondary education (ANZSCO Skill Level 5)

In New Zealand:

- NZ Register Level 2 or 3 qualification, or at least one year of relevant experience (ANZSCO Skill Level 4); or
- NZ Register Level 1 qualification, or compulsory secondary education (ANZSCO Skill Level 5)

In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification. In the case of some Skill Level 5 occupations, a short period of on-the-job training may be required in addition to or instead of the formal qualification, or no formal qualification or on-the-job training may be required.

Tasks include:

- loading and unloading construction materials and equipment, and transporting them around building sites
- mixing, spreading and levelling concrete, plaster and mortar
- laying out fence lines and lifting and positioning posts
- insulating buildings, pipes and ducting
- fitting awnings, security screens and other home improvements
- assembling and erecting scaffolding and rigging
- digging holes and trenches, and spreading, levelling and compacting soil, gravel, sand and ballast
- erecting and dismantling barricades
- directing cranes

Occupations in this minor group are classified into the following unit groups:

- 8211 Building and Plumbing Labourers
- 8212 Concrete
- 8215 Fences
- 8214 Insulation and Home Improvement Installers
- 8215 Paving and Surfacing Labourers
- 8216 Railway Track Workers
- 8217 Structural Steel Construction Workers
- 8219 Other Construction and Mining Labourers

UNIT GROUP 8211 BUILDING AND PLUMBING LABOURERS

BUILDING AND PLUMBING LABOURERS perform a variety of routine tasks associated with erecting and repairing structures and facilities, maintaining stormwater, drainage and sewerage systems, excavating earth and clearing and levelling sites, and installing and maintaining piping systems, fixtures and water regulators.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with the qualifications outlined below.

In Australia:

AQF Certificate I, or compulsory secondary education (ANZSCO Skill Level 5)

In New Zealand:

NZ Register Level 1 qualification, or compulsory secondary education (ANZSCO Skill Level 5)

For some occupations a short period of on-the-job training may be required in addition to or instead of the formal qualification. In some instances no formal qualification or on-the-job training may be required.

Tasks include:

- loading and unloading building and construction materials, tools and equipment and transporting them around building sites
- erecting and dismantling temporary structures such as barricades and scaffolding
- mixing, pouring and spreading materials such as concrete, plaster and mortar
- clearing and carrying out minor repairs on stormwater drains and canals, and checking for cracks and leaks in sewerage systems
- digging holes and shovelling excavated material onto conveyors, wheelbarrows and trucks for removal
- spreading and levelling soil, gravel and sand on roads and driveways, trench bottoms and similar locations
- assisting with assembling and installing piping, valves and fittings
- assisting with installing fixtures such as toilets, wash basins and sprinkler systems

Occupations:

- 821111 Builder's Labourer
- 821112 Drainage, Sewerage and Stormwater Labourer
- 821113 Earthmoving Labourer
- 821114 Plumber's Assistant

821111 BUILDER'S LABOURER*Alternative Title:*

Construction Worker

Performs routine tasks in erecting and repairing structures and facilities on building and construction sites and in factories producing prefabricated building components.

*Skill Level: 5**Specialisations:*

- Bricklayer's Assistant
- Carpenter's Assistant
- Tiler's Assistant

MAJOR GROUP 8 *continued*

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UNIT GROUP 8211 BUILDING AND PLUMBING LABOURERS *continued*

821112 DRAINAGE, SEWERAGE AND STORMWATER LABOURER

Performs routine tasks in maintaining drainage, sewerage and stormwater systems.

Skill Level 5

821113 EARTHMOVING LABOURER

Performs routine tasks in excavating earth, clearing and leveling sites, and digging irrigation channels.

Skill Level 5

Specialisation:

Grave Digger

821114 PLUMBER'S ASSISTANT

Performs routine tasks in fabricating, laying, installing and maintaining pipes, fixtures, water meters and regulators.

Skill Level 5

UNIT GROUP 8212 CONCRETERS

CONCRETERS pour, spread, smooth and finish concrete for structures such as floors, stairs, ramps, footpaths and bridges.

Indicative Skill Level:

Most occupations in this unit group have a level of skill commensurate with the qualifications outlined below.

In Australia:

MQF Certificate I, or compulsory secondary education (ANZSCO Skill Level 5)

In New Zealand:

NZ Register Level 1 qualification, or compulsory secondary education (ANZSCO Skill Level 5)

For some occupations a short period of on-the-job training may be required in addition to or instead of the formal qualification. In some instances no formal qualification or on-the-job training may be required.

Tasks include:

- erecting concrete form work and laying steel reinforcing
- pouring, spreading and levelling concrete using screeds and templates
- tamping, smoothing, shaping and sealing concrete
- operating trowelling machines to float, trowel and polish concrete surfaces
- forming expansion joints and edges using edging tools, jointers and straight edges
- installing fixtures in concrete such as anchor bolts, steel plates and door sills
- wetting concrete and rubbing with abrasives to finish vertical surfaces
- covering concrete with plastic sheeting and sand to cure it
- cutting lines in concrete using power cutters
- may cover freshly poured concrete with colouring powders and other materials

Occupation:

821211 Concretor

821211 CONCRETER

Alternative Title:

Concrete Worker

Pours, spreads, smooths and finishes concrete for structures such as floors, stairs, ramps, footpaths and bridges.

Skill Level: 5

UNIT GROUP 8213 FENCERS

FENCERS erect and repair fences and gates.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

MQF Certificate II or III (ANZSCO Skill Level 4)

In New Zealand:

NZ Register Level 2 or 3 qualification (ANZSCO Skill Level 4)

At least one year of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks include:

- laying out fence lines and marking positions for post holes
- lifting and positioning fence posts in holes and securing posts with concrete, stone fill and soil
- forming fence frames
- constructing and attaching gates to fences
- stretching materials between fence posts
- constructing wooden paling, fibre-cement and metal fences
- repairing and demolishing existing fences

Occupation:

821311 Fencer

821311 FENCER

Alternative Title:

Fence Erector

Erects and repairs fences and gates.

Skill Level: 4

UNIT GROUP 8214 INSULATION AND HOME IMPROVEMENT INSTALLERS

INSULATION AND HOME IMPROVEMENT INSTALLERS install a variety of insulation materials to improve resistance to heat, cold, air, sound and moisture, and install functional and decorative home improvements.

Indicative Skill Level:

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate II or III (ANZSCO Skill Level 4)

In New Zealand:

NZ Register Level 2 or 3 qualification (ANZSCO Skill Level 4)

At least one year of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Registration or licensing may be required.

Tasks include:

- examining plans, specifications and work sites to determine the type and quality of installations required and their location
- preparing site for insulation and installation of fittings by nailing up furring, drilling holes for screws and bolts, and erecting scaffolding and ladders
- gluing blocks and slabs of foamed plastic and cork to walls
- operating equipment to blow and spray mineral wool, fibre fill and foam insulation material into cavities
- cutting insulation material to size and shape, and nailing and stapling batt-type insulation to joists, studs and furring
- measuring, cutting and applying solar control film to windows
- fitting awnings, security screens, shower screens, prefabricated windows and doors, exterior cladding and other home improvements using hand tools
- drilling holes in wood, brick, stone and fibrous structures, and bolting, screwing and nailing fittings into place
- attaching and adjusting mechanical fittings such as cranks, locks and pull-cords
- installing flashing and waterproofing to fittings such as shower screens and prefabricated windows and doors

Occupations:

821411 Building Insulation Installer

821412 Home Improvement Installer

821411 BUILDING INSULATION INSTALLER

Installs and applies insulating material, such as foam, granules, foil, solar film, bats and blankets, to walls, floors, windows and ceilings of buildings to insulate against heat, cold, air, sound and moisture. Registration or licensing may be required.

Skill Level: 4

Specialisations:

Window Tinter (Building)

UNIT GROUP 8214 INSULATION AND HOME IMPROVEMENT INSTALLERS

continued

821412 HOME IMPROVEMENT INSTALLER

Installs functional and decorative home improvements such as awnings, curtains, blinds, security screens, garage doors, exterior cladding, shower screens and prefabricated windows and doors. Registration or licensing may be required.

Skill Level 4

Specialisations:

- Awning Installer
- Carport Erector
- Curtain Fitter
- Security Door Installer
- Shower Screen Installer

UNIT GROUP 8215 PAVING AND SURFACING LABOURERS

PAVING AND SURFACING LABOURERS perform routine tasks associated with laying bituminous and other paving materials on roads, runways, parking areas and other surfaces to be paved.

Indicative Skill Level:

Most occupations in this unit group have a level of skill commensurate with the qualifications outlined below.

In Australia:

MQF Certificate I, or compulsory secondary education (ANZSCO Skill Level 5)

In New Zealand:

NZ Register Level 1 qualification, or compulsory secondary education (ANZSCO Skill Level 5)

For some occupations a short period of on-the-job training may be required in addition to or instead of the formal qualification. In some instances no formal qualification or on-the-job training may be required.

Tasks include:

- sweeping paving bases prior to laying asphalt and other surfaces
- sprinkling and brushing hot and cold-mix asphalt over surfaces to be paved and repaired to bond asphalt toppings to bases
- operating tank-truck distributors and hoses to spray tar and road oils and emulsions on graded surfaces prior to paving
- tripping tail-gate levers to discharge hot-mix asphalt into paving machines, and spreading stone chips, gravel and cold-mix asphalt onto road surfaces
- shovelling asphalt mix into areas inaccessible to paving machines, and compacting mix using rakes and hand tampers
- cutting and trimming damaged surfaces using jack-hammers and softening edges of areas to be repaired with blowtorches
- erecting and dismantling barricades
- loading and unloading equipment, and cleaning work sites
- may direct traffic

Occupation:

821511 Paving and Surfacing Labourer

821511 PAVING AND SURFACING LABOURER

Performs routine tasks associated with laying bituminous and other paving materials on roads, runways, parking areas and other surfaces to be paved.

Skill Level: 5

UNIT GROUP 8216 RAILWAY TRACK WORKERS

RAILWAY TRACK WORKERS lay and repair tracks for railways, tramways, quarries and mines, and install and repair signals and other equipment.

Indicative Skill Level:

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate II or III (ANZSCO Skill Level 4)

In New Zealand:

NZ Register Level 2 or 3 qualification (ANZSCO Skill Level 4)

At least one year of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks include:

- spreading and tamping ballast to provide firm foundation for sleepers
- cutting rails to length and grinding worn and rough rail ends
- placing sleepers across roadbeds, and positioning and fastening rails on sleepers
- drilling bolt holes, and bolting and welding rail sections
- removing and replacing worn and damaged rails, sleepers and switches
- cleaning and lubricating switches
- examining track, lubricating wheel bearings on rolling stock and maintaining switch signal lamps
- installing and repairing signals and other equipment
- may assist with the righting of derailed rolling stock

Occupation:

821611 Railway Track Worker

821611 RAILWAY TRACK WORKER*Alternative Title:*

Railway Fitter

Lays and repairs tracks for railways, tramways, quarries and mines, and installs and repairs signals and other equipment.

Skill Level: 4*Specialisation:*

Track Inspector

UNIT GROUP 8217 STRUCTURAL STEEL CONSTRUCTION WORKERS

STRUCTURAL STEEL CONSTRUCTION WORKERS assemble rigging gear to move and position equipment and structural components, erect scaffolding, position and secure steel reinforcing in concrete forms, and erect and dismantle structural steel frames.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

MQF Certificate II or III (ANZSCO Skill Level 4)

In New Zealand:

NZ Register Level 2 or 3 qualification (ANZSCO Skill Level 4)

At least one year of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Registration or licensing may be required.

Tasks include:

- erecting lifting tackles by attaching pulleys and blocks to fixed overhead structures, and installing cables and attaching counterweights
- attaching slinging gear to hoisting equipment and objects to be moved using clamps, hooks, bolts and knots
- fitting and bolting tubes, support braces and components to form bases and build up scaffolding
- lifting and positioning sections of scaffolding
- measuring, cutting, bending and fitting welded wire mesh into concrete areas to be mesh-reinforced
- fixing mesh and reinforcing steel into position in formwork for concrete pours
- setting up winches and rigging equipment to raise and position girders, plates, columns and other steel units
- erecting guard rails, guy wires, ropes and cleats, laying planks and hanging safety nets

Occupations:

- 821711 Construction Rigger
- 821712 Scaffolder
- 821715 Steel Fixer
- 821714 Structural Steel Erector

821711 CONSTRUCTION RIGGER

Assembles and installs rigging gear, such as cables, ropes, pulleys and winches, to lift, lower, move and position equipment, structural steel and other heavy objects. Registration or licensing may be required.

Skill Level 4

821712 SCAFFOLDER

Erects and dismantles scaffolding to provide work platforms on building and industrial sites, and for temporary structures such as staging and seating. Registration or licensing may be required.

Skill Level 4

MAJOR GROUP 8 *continued*

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UNIT GROUP 8217 STRUCTURAL STEEL CONSTRUCTION WORKERS *continued*

821713 STEEL FIXER

Positions and secures steel bars and steel mesh in concrete forms to reinforce concrete structures. Registration or licensing may be required.

Skill Level: 4

821714 STRUCTURAL STEEL ERECTOR

Erects and dismantles structural steel frames of buildings and other structures. Registration or licensing may be required.

Skill Level: 4

UNIT GROUP 8219 OTHER CONSTRUCTION AND MINING LABOURERS

This unit group covers Construction and Mining Labourers not elsewhere classified.

It includes Crane Chasers, Driller's Assistants, Lagers, Mining Support Workers and Surveyor's Assistants.

Indicative Skill Level:

Most occupations in this unit group have a level of skill commensurate with the qualifications outlined below.

In Australia:

AQF Certificate I, or compulsory secondary education (ANZSCO Skill Level 5)

In New Zealand:

NZ Register Level 1 qualification, or compulsory secondary education (ANZSCO Skill Level 5)

For some occupations a short period of on-the-job training may be required in addition to or instead of the formal qualification. In some instances no formal qualification or on-the-job training may be required.

Occupations:

- 821911 Crane Chaser
- 821912 Driller's Assistant
- 821913 Lagger
- 821914 Mining Support Worker
- 821915 Surveyor's Assistant

821911 CRANE CHASER

Slings cranes and winches, and directs the movement of loads ensuring loads do not exceed lifting capacities.

Skill Level: 5

Specialisations:

- Dogman/woman
- Slinger

821912 DRILLER'S ASSISTANT

Alternative Titles:

- Driller's Offsider
- Roustabout (Oil and Gas)

Performs routine tasks in setting up, operating and dismantling drilling sites for extracting oil, gas, mineral ore or water.

Skill Level: 5

Specialisations:

- Derrick Hand
- Roughneck
- Well Treatment Offsider

821913 LAGGER

Applies insulating materials, such as felt, fibreglass, polyurethane and cork, to pipes, steam generators, process vats and ducting, and secures insulation with wire, wire netting, staples, metal strapping and using welding torches.

Skill Level: 5

UNIT GROUP 8219 OTHER CONSTRUCTION AND MINING LABOURERS *continued*

821914 MINING SUPPORT WORKER

Alternative Title:

Mineral Ore Processing Labourer

Performs routine tasks in mining and mineral ore treating operations such as assembling, operating and dismantling mining equipment, taking ore, rock and dust samples, and mining ore treating chemicals and catalysts.

Skill Level: 5

Specialisations:

Pit Crew Support Worker

Wash Plant Attendant

821915 SURVEYOR'S ASSISTANT

Performs routine tasks to assist Surveyors and Geologists by transporting, assembling, maintaining and laying out prospecting and surveying equipment, and collecting and labeling samples.

Skill Level: 5

Specialisations:

Geological Survey Field Assistant

Seismic Survey Assistant

SUB-MAJOR GROUP 83 FACTORY PROCESS WORKERS

FACTORY PROCESS WORKERS perform routine tasks in processing, manufacturing and packaging food, beverages and other products.

Indicative Skill Level

Most occupations in this sub-major group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

- AQF Certificate II or III, or at least one year of relevant experience (ANZSCO Skill Level 4), or
- AQF Certificate I, or compulsory secondary education (ANZSCO Skill Level 5)

In New Zealand:

- NZ Register Level 2 or 3 qualification, or at least one year of relevant experience (ANZSCO Skill Level 4); or
- NZ Register Level 1 qualification, or compulsory secondary education (ANZSCO Skill Level 5)

In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification. In the case of some Skill Level 5 occupations, a short period of on-the-job training may be required in addition to or instead of the formal qualification, or no formal qualification or on-the-job training may be required.

Tasks include:

- sousing, weighing and mixing raw materials, and loading into machines
- wrapping products, and filling, labeling and sealing containers by hand and machine
- storing and stacking finished products, and cleaning machines and work areas
- inspecting and grading products
- assembling components and subassemblies for further processing and to make finished products

Occupations in this sub-major group are classified into the following minor groups:

- 831 Food Process Workers
- 832 Packers and Product Assemblers
- 839 Miscellaneous Factory Process Workers

MINOR GROUP 832 PACKERS AND PRODUCT ASSEMBLERS

PACKERS AND PRODUCT ASSEMBLERS wrap and place items into containers and seal containers in preparation for despatch to customers, and assemble components and subassemblies of products.

Indicative Skill Level

Most occupations in this minor group have a level of skill commensurate with the qualifications outlined below.

In Australia:

MQF Certificate I, or compulsory secondary education (ANZSCO Skill Level 5)

In New Zealand:

NZ Register Level 1 qualification, or compulsory secondary education (ANZSCO Skill Level 5)

For some occupations a short period of on-the-job training may be required in addition to or instead of the formal qualification. In some instances no formal qualification or on-the-job training may be required.

Tasks include:

- filling and packing products into containers
- labelling and wrapping finished products
- monitoring weight and quantity of products
- locating, positioning and securing components on workbenches
- assembling and securing components in sequence
- assembling parts, deburring and finishing items and fitting hardware

Occupations in this minor group are classified into the following unit groups:

8321 Packers

8322 Product Assemblers

UNIT GROUP 8321 PACKERS

PACKERS weigh, wrap, seal and label chocolate, fruit, vegetables, meat, seafood and other products.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with the qualifications outlined below.

In Australia:

AQF Certificate I, or compulsory secondary education (ANZSCO Skill Level 5)

In New Zealand:

NZ Register Level 1 qualification, or compulsory secondary education (ANZSCO Skill Level 5)

For some occupations a short period of on-the-job training may be required in addition to or instead of the formal qualification. In some instances no formal qualification or on-the-job training may be required.

Tasks include:

- obtaining supplies of products and assembling bags, package folders and cartons
- packing containers and bags with products, and counting, weighing and measuring amounts and adjusting quantities
- wrapping protective material around products, sealing bags and containers, and attaching pre-printed labels
- counting and placing bags and packages onto trays and racks, and into shipping cartons
- recording information such as numbers, weight, times and dates
- monitoring the filling of containers and adjusting machines to maintain volume and seal quality
- monitoring the supply and quality of containers and contents of holding tanks
- checking the cleanliness and operation of machines, equipment and containers

Occupations:

- 832111 Chocolate Packer
- 832112 Container Filler
- 832113 Fruit and Vegetable Packer
- 832114 Meat Packer
- 832115 Seafood Packer
- 832199 Packers nec

832111 CHOCOLATE PACKER

Weights, wraps, seals and labels chocolate products.

Skill Level 5

832112 CONTAINER FILLER

Fills and seals containers with products, such as food, beverages, paints, oils and lotions, and packages the filled containers.

Skill Level 5

Specialisations:

- Bottling Attendant
- Cannery Worker
- Labelling Machine Operator

MAJOR GROUP 8 *continued*

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UNIT GROUP 8321 PACKERS *continued*

832113 FRUIT AND VEGETABLE PACKER

Weighs, wraps, seals and labels fruit and vegetables.

Skill Level 5

832114 MEAT PACKER

Weighs, wraps, seals and labels meat and meat products.

Skill Level 5

832115 SEAFOOD PACKER

Weighs, wraps, seals and labels seafood products.

Skill Level 5

832199 PACKERS NEC

This occupation group covers Packers not elsewhere classified.

Skill Level 5

Occupations in this group include:

Cheese Packer

Egg Packer

UNIT GROUP 8322 PRODUCT ASSEMBLERS

PRODUCT ASSEMBLERS put together components and subassemblies that go into the production of metal products, electrical and electronic equipment, jewellery and precious metal articles, and joinery products.

Indicative Skill Level:

Most occupations in this unit group have a level of skill commensurate with the qualifications outlined below.

In Australia:

MQF Certificate I, or compulsory secondary education (ANZSCO Skill Level 5)

In New Zealand:

NZ Register Level 1 qualification, or compulsory secondary education (ANZSCO Skill Level 5)

For some occupations a short period of on-the-job training may be required in addition to or instead of the formal qualification. In some instances no formal qualification or on-the-job training may be required.

Tasks include:

- locating, positioning and securing components on workbenches
- punching and drilling mounting holes in parts and assembled products
- assembling and securing components in sequence
- assembling parts by routing, screwing, gluing and dowelling, riveting, crimping, soldering and spot welding components
- fitting hardware items, such as hinges, catches and knobs, to parts
- attaching and fastening jewellery and jewellery parts to fabricate bracelets, necklaces, brooches and earrings
- deburring and finishing items using files, grinding wheels and emery paper
- may manually wind light electrical field coils

Occupation:

832211 Product Assembler

832211 PRODUCT ASSEMBLER

Puts together components and subassemblies that go into the production of metal products, electrical and electronic equipment, jewellery and precious metal articles, and joinery products.

Skill Level: 5

Specialisations:

Electrical and Electronic Assembler
Light Coil Winder
Vehicle Assembler

MINOR GROUP 839 MISCELLANEOUS FACTORY PROCESS WORKERS

This minor group covers Factory Process Workers not elsewhere classified.

It includes Metal Engineering Process Workers, Plastics and Rubber Factory Workers, Product Quality Controllers, and Timber and Wood Process Workers.

Indicative Skill Level

Most occupations in this minor group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate II or III, or at least one year of relevant experience (ANZSCO Skill Level 4); or
AQF Certificate I, or compulsory secondary education (ANZSCO Skill Level 5)

In New Zealand:

NZ Register Level 2 or 3 qualification, or at least one year of relevant experience (ANZSCO Skill Level 4); or
NZ Register Level 1 qualification, or compulsory secondary education (ANZSCO Skill Level 5)

In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification. In the case of some Skill Level 5 occupations, a short period of on-the-job training may be required in addition to or instead of the formal qualification, or no formal qualification or on-the-job training may be required.

Occupations in this minor group are classified into the following unit groups:

- 8391 Metal Engineering Process Workers
- 8392 Plastics and Rubber Factory Workers
- 8393 Product Quality Controllers
- 8394 Timber and Wood Process Workers
- 8399 Other Factory Process Workers

UNIT GROUP 8391 METAL ENGINEERING PROCESS WORKERS

METAL ENGINEERING PROCESS WORKERS perform routine tasks in manufacturing metal products.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with the qualifications outlined below.

In Australia:

AQF Certificate I, or compulsory secondary education (ANZSCO Skill Level 5)

In New Zealand:

NZ Register Level 1 qualification, or compulsory secondary education (ANZSCO Skill Level 5)

For some occupations a short period of on-the-job training may be required in addition to or instead of the formal qualification. In some instances no formal qualification or on-the-job training may be required.

Tasks include:

- positioning and holding tools and metal products
- performing assembly and dismantling operations such as screwing and bolting
- operating power hammers, presses and other metal cutting and shaping tools and machines
- soldering and spot welding components using electrical spot and butt welding machines
- transporting tools, materials and work pieces to and from sites and workbenches
- cleaning and preparing working surfaces

Occupation:

839111 Metal Engineering Process Worker

839111 METAL ENGINEERING PROCESS WORKER

Performs routine tasks in manufacturing metal products.

Skill Level: 5

Specialisations:

Boilermaker's Assistant
Fitter's Assistant
Metal Forger's Assistant
Metal Moulder's Assistant

UNIT GROUP 8392 PLASTICS AND RUBBER FACTORY WORKERS

PLASTICS AND RUBBER FACTORY WORKERS perform routine tasks in manufacturing plastic and rubber products.

Indicative Skill Level:

Most occupations in this unit group have a level of skill commensurate with the qualifications outlined below.

In Australia:

MQF Certificate I, or compulsory secondary education (ANZSCO Skill Level 5)

In New Zealand:

NZ Register Level 1 qualification, or compulsory secondary education (ANZSCO Skill Level 5)

For some occupations a short period of on-the-job training may be required in addition to or instead of the formal qualification. In some instances no formal qualification or on-the-job training may be required.

Tasks include:

- dumping material into hoppers of machines
- stopping moulding machines and discharging contents
- cutting foam products from foam blocks
- clearing, smoothing and waxing moulds for making products
- brushing and spraying release agents onto moulds to assist with the removal of moulded products
- building up layers of fibreglass and resin on moulds
- clearing work areas, tools and equipment
- may smooth rough edges of moulds using files, grinders and sanders

Occupations:

839211 Plastics Factory Worker

839212 Rubber Factory Worker

839211 PLASTICS FACTORY WORKER

Alternative Title:

Plastics Process Hand

Performs routine tasks in manufacturing plastic goods.

Skill Level: 5

Specialisations:

Cellular Plastics Cutter

Fibreglass Lay Up Worker

839212 RUBBER FACTORY WORKER

Alternative Title:

Rubber Process Hand

Performs routine tasks in manufacturing tyres and other rubber products.

Skill Level: 5

Specialisation:

Latex Foam Worker

UNIT GROUP 8393 PRODUCT QUALITY CONTROLLERS

PRODUCT QUALITY CONTROLLERS examine manufactured products and primary produce to ensure conformity to specifications and standards of presentation and quality.

Indicative Skill Level:

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate II or III (ANZSCO Skill Level 4)

In New Zealand:

NZ Register Level 2 or 3 qualification (ANZSCO Skill Level 4)

At least one year of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks Include:

- studying product specifications and taking measurements to determine conformity to specifications
- examining and marking output for visible defects such as cracks, holes and breakages
- making minor repairs and adjustments to products
- compiling quality assurance reports, maintaining documentation and reporting findings
- examining products for defects and grading produce
- designating grading of produce and recording details of assessments according to classification system
- collecting and labelling samples for inspection
- recording details of sampling procedures and sources of samples
- preparing samples and carrying out prescribed tests

Occupations:

839511 Product Examiner
839512 Product Grader
839515 Product Taster

839311 PRODUCT EXAMINER*Alternative Titles:*

Quality Assurance Assessor
Quality Control Assessor

Examines products to ensure conformity to specifications and standards of presentation and quality.

*Skill Level: 4**Specialisations:*

Film Examiner
Metal Products Viewer
Textile Examiner
Type Finisher and Examiner
Vehicle Assembly Inspector

UNIT GROUP 8393 PRODUCT QUALITY CONTROLLERS *continued*

839312 PRODUCT GRADER

Grades primary produce by evaluating individual items or batches against established standards and records results.

Skill Level: 4

Specialisations:

- Fruit and Vegetable Grader
- Meat Grader
- Milk and Cream Grader
- Timber Grader

839313 PRODUCT TESTER

Collects product samples, conducts tests to determine quality of produce and maintains records of results.

Skill Level: 4

Specialisations:

- Coal Sample Tester
- Glassware Verifier
- Iron Pellet Tester

UNIT GROUP 8394 **TIMBER AND WOOD PROCESS WORKERS**

TIMBER AND WOOD PROCESS WORKERS perform routine tasks in paper and pulp mills, sawmills, timber yards, and wood processing and timber products factories.

Indicative Skill Level:

Most occupations in this unit group have a level of skill commensurate with the qualifications outlined below.

In Australia:

MQF Certificate I, or compulsory secondary education (ANZSCO Skill Level 5)

In New Zealand:

NZ Register Level 1 qualification, or compulsory secondary education (ANZSCO Skill Level 5)

For some occupations a short period of on-the-job training may be required in addition to or instead of the formal qualification. In some instances no formal qualification or on-the-job training may be required.

Tasks include:

- rolling logs from trucks and conveyors to log decks, saw carriages and stacking bays
- placing logs and wood billets onto conveyors and lathes for processing into chips, veneers and pulp
- sorting and stacking timber during milling
- placing timber for processing by machines and unloading cut timber from tail end of machines
- assisting with setting up and operating plant and ancillary equipment used in the manufacture of sheets and boards
- transporting processed wood products, such as plywood, chipboard sheets and panels, to work areas
- clearing blockages in machines
- assisting with measuring and cutting materials
- packing and loading finished products for transportation
- cleaning work areas, tools and equipment

Occupations:

- 839411 Paper and Pulp Mill Worker
- 839412 Sawmill or Timber Yard Worker
- 839415 Wood and Wood Products Factory Worker

839411 PAPER AND PULP MILL WORKER

Alternative Title:

Pulp, Paper Making and Paper Products Labourer

Performs routine tasks in a paper and pulp mill such as placing logs onto conveyors for chipping, and loading woodchip and pulp for processing.

Skill Level 5

MAJOR GROUP 8 *continued*

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UNIT GROUP 8394 TIMBER AND WOOD PROCESS WORKERS *continued*

839412 SAWMILL OR TIMBER YARD WORKER

Alternative Titles:

Timber Mill Worker

Wood Processing Worker

Performs routine tasks in a sawmill or timber yard such as sorting and stacking timber, assisting timber machinists, assembling orders and racking offcuts.

Skill Level: 5

Specialisations:

Take-out

839413 WOOD AND WOOD PRODUCTS FACTORY WORKER

Alternative Title:

Wood and Wood Products Labourer

Performs routine tasks in a wood processing and timber product factory such as placing logs on equipment and conveyors, assisting with measuring and cutting of materials, and setting up and operating plant equipment.

Skill Level: 5

Specialisations:

Hardboard Factory Worker

Joinery Factory Worker

Particleboard Factory Worker

Plywood Factory Worker

UNIT GROUP 8399 OTHER FACTORY PROCESS WORKERS

This unit group covers Factory Process Workers not elsewhere classified.

It includes Cement and Concrete Plant Workers, Chemical Plant Workers, Clay Processing Factory Workers, Fabric and Textile Factory Workers, Footwear Factory Workers, Glass Processing Workers, and Hide and Skin Processing Workers.

Indicative Skill Level:

Most occupations in this unit group have a level of skill commensurate with the qualifications outlined below.

In Australia:

AQF Certificate I, or compulsory secondary education (ANZSCO Skill Level 5)

In New Zealand:

NZ Register Level 1 qualification, or compulsory secondary education (ANZSCO Skill Level 5)

For some occupations a short period of on-the-job training may be required in addition to or instead of the formal qualification. In some instances no formal qualification or on-the-job training may be required.

Occupations:

- 839911 Cement and Concrete Plant Worker
- 839912 Chemical Plant Worker
- 839915 Clay Processing Factory Worker
- 839914 Fabric and Textile Factory Worker
- 839915 Footwear Factory Worker
- 839916 Glass Processing Worker
- 839917 Hide and Skin Processing Worker
- 839999 Factory Process Workers nec

839911 CEMENT AND CONCRETE PLANT WORKER

Performs routine tasks in manufacturing cement and concrete products such as greasing and assembling concrete moulds, holding reinforcing steel in position during concrete pours, stripping moulds from dried concrete products, and finishing products.

Skill Level: 5

839912 CHEMICAL PLANT WORKER

Performs routine tasks in a chemical processing plant such as delivering materials to processing areas, dumping ingredients into hoppers, operating machines to heat, cool and agitate chemical solutions, filling and lustering covers on containers, and attaching labels and information on products.

Skill Level: 5

Specialisations:

- Gas Plant Worker
- Munitions Factory Worker
- Paint Factory Worker

UNIT GROUP 8399 OTHER FACTORY PROCESS WORKERS *continued*

839913 CLAY PROCESSING FACTORY WORKER

Alternative Title:

Clay Processing Labourer

Performs routine tasks in manufacturing clay and ceramic products such as loading clay into machines, stacking products on kiln cars, pallets and trolleys, and moving kiln cars and trolleys to and from kilns, dryers, sorting, storage and shipping areas.

Skill Level: 5

Specialisations:

Brick Handler

Carousel Minder

Kiln Labourer

839914 FABRIC AND TEXTILE FACTORY WORKER

Performs routine tasks in a fabric and textile factory such as cutting canvas, upholstery and curtain fabrics, delivering materials to machines, operating automatic machines using computerised patterns, pressing partially completed and finished garments, and inspecting and finishing completed garments.

Skill Level: 5

839915 FOOTWEAR FACTORY WORKER

Performs routine tasks in manufacturing footwear such as basic hand cutting of shoe components, delivering materials to machines, and inspecting and finishing completed footwear.

Skill Level: 5

839916 GLASS PROCESSING WORKER

Performs routine tasks in manufacturing glassware such as setting up, adjusting and repairing automatic machines and equipment, and checking weight of glassware.

Skill Level: 5

Specialisation:

Glass Mould Cleaner

839917 HIDE AND SKIN PROCESSING WORKER

Performs routine tasks in tanning and finishing leather, hides and skins such as fleshing hides by cutting out pieces of flesh and fat, laying out hides and skins for classing and drying and arranging heaters to dry them, spraying dried hides with preservatives, and treating, pressing and securing hides and skins.

Skill Level: 5

Specialisations:

Pellmongery Worker

Hand Flesher

Tannery Worker

UNIT GROUP 8993 HANDYPERSONS

HANDYPERSONS clean, paint, repair and maintain buildings, grounds and facilities.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with the qualifications outlined below.

In Australia:

AQF Certificate I, or compulsory secondary education (ANZSCO Skill Level 5)

In New Zealand:

NZ Register Level 1 qualification, or compulsory secondary education (ANZSCO Skill Level 5)

For some occupations a short period of on-the-job training may be required in addition to or instead of the formal qualification. In some instances no formal qualification or on-the-job training may be required.

Tasks include:

- repairing broken windows, screens, doors, fences, barbecues, picnic tables, shelves, cupboards and other items
- replacing defective items such as light bulbs
- repairing and painting interior and exterior surfaces such as walls, ceilings and fences
- clearing rubbish and leaves from driveways and grounds
- mowing lawns and cultivating gardens
- adjusting doors and windows
- replacing tap washers
- putting up handrails and grab rails

Occupation:

89511 Handyman

899311 HANDYPERSON

Cleans, paints, repairs and maintains buildings, grounds and facilities.

Skill Level: 5

Specialisations:

Hotel Useful

Hotel Handyman

UNIT GROUP 8994 MOTOR VEHICLE PARTS AND ACCESSORIES FITTERS

MOTOR VEHICLE PARTS AND ACCESSORIES FITTERS fit and replace parts and accessories on motor vehicles.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

MQF Certificate II or III (ANZSCO Skill Level 4)

In New Zealand:

NZ Register Level 2 or 3 qualification (ANZSCO Skill Level 4)

At least one year of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks include:

- removing old and damaged parts and cleaning surrounding areas on vehicles
- fitting batteries and installing accessories such as sun roofs, stereos and alarms
- removing damaged glass, trimming strips and rubber seals from window frames and mountings on motor vehicles, positioning new windcreens and glass windows on frames and attaching and sealing them
- inspecting, removing and repairing muffler mountings, and fitting new mufflers, extractors and exhaust pipes
- removing radiators from vehicles and cleaning and repairing them
- installing new or repaired radiators into vehicles and repairing and replacing other units in the cooling system such as thermostats, head gaskets and water pumps
- inspecting tyres to determine which repair action to implement and repairing punctures in tubes and tubeless tyres
- operating air driven equipment to remove and refit tyres and tubes on vehicles
- balancing wheels and tyres using static and electronic equipment

Occupations:

899411 Motor Vehicle Parts and Accessories Fitter (General)

899412 Autoglazier

899415 Exhaust and Muffler Fitter

899414 Radiator Fitter

899415 Tyre Fitter

899411 MOTOR VEHICLE PARTS AND ACCESSORIES FITTER (GENERAL)

Fits and replaces parts and accessories on motor vehicles.

Skill Level: 4

899412 AUTOGLAZIER

Alternative Title

Windscreen Fitter

Repairs and replaces windcreens and side and rear glass in motor vehicles.

Skill Level: 4

Specialisation:

Vehicle Window Tinter

MAJOR GROUP 8 *continued*

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UNIT GROUP 8994 MOTOR VEHICLE PARTS AND ACCESSORIES FITTERS

continued

899413 EXHAUST AND MUFFLER FITTER

Repairs and replaces defective exhaust and muffler systems in motor vehicles.

Skill Level: 4

899414 RADIATOR FITTER

Repairs and replaces radiators and cooling systems in motor vehicles.

Skill Level: 4

899415 TYRE FITTER

Fits, repairs and replaces tyres on motor vehicles.

Skill Level: 4

UNIT GROUP 8995 PRINTING ASSISTANTS AND TABLE WORKERS

PRINTING ASSISTANTS AND TABLE WORKERS perform routine printing tasks, operate bindery machines and perform manual binding and finishing of books and printed products.

Indicative Skill Level:

Most occupations in this unit group have a level of skill commensurate with the qualifications and experience outlined below.

In Australia:

AQF Certificate II or III (ANZSCO Skill Level 4)

In New Zealand:

NZ Register Level 2 or 3 qualification (ANZSCO Skill Level 4)

At least one year of relevant experience may substitute for the formal qualifications listed above. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

Tasks include:

- assisting with setting up, operating and adjusting machines
- maintaining and lubricating printing and bindery machines
- clearing waste and cleaning work areas and machines
- folding, collating and fastening printed products by machine and hand
- performing hand binding and finishing operations
- operating specialised machines such as casing-in and mini binders, and automatic carton folding and gluing machines
- carrying out routine quality control

Occupations:

899511 Printer's Assistant

899512 Printing Table Worker

899511 PRINTER'S ASSISTANT

Performs routine tasks in the production of printed materials.

Skill Level 4

899512 PRINTING TABLE WORKER

Alternative Titles:

Printing Bindery Assistant

Printing Table Hand

Operates bindery machines and performs manual binding and finishing of books and printed products.

Skill Level 4

UNIT GROUP 8996 RECYCLING AND RUBBISH COLLECTORS

RECYCLING AND RUBBISH COLLECTORS collect household, commercial and industrial waste for recycling and disposal.

Indicative Skill Level:

Most occupations in this unit group have a level of skill commensurate with the qualifications outlined below.

In Australia:

MQF Certificate I, or compulsory secondary education (ANZSCO Skill Level 5)

In New Zealand:

NZ Register Level 1 qualification, or compulsory secondary education (ANZSCO Skill Level 5)

For some occupations a short period of on-the-job training may be required in addition to or instead of the formal qualification. In some instances no formal qualification or on-the-job training may be required.

Tasks include:

- riding on and in garbage and recycling trucks
- collecting rubbish and items for recycling from domestic, commercial and industrial premises
- loading rubbish and recycling into bins and garbage and recycling trucks
- unloading garbage and recycling trucks
- may operate compacting equipment on garbage trucks
- may supervise other garbage collectors

Occupation:

899611 Recycling or Rubbish Collector

899611 RECYCLING OR RUBBISH COLLECTOR

Alternative Title:

Waste Removance

Collects household, commercial and industrial waste for recycling or disposal.

Skill Level: 5

Specialisation:

Garbage Depot Worker

UNIT GROUP 8997 VENDING MACHINE ATTENDANTS

VENDING MACHINE ATTENDANTS stock and maintain vending and amusement machines and collect money from coin boxes.

Indicative Skill Level

Most occupations in this unit group have a level of skill commensurate with the qualifications outlined below.

In Australia:

MQF Certificate I, or compulsory secondary education (ANZSCO Skill Level 5)

In New Zealand:

NZ Register Level 1 qualification, or compulsory secondary education (ANZSCO Skill Level 5)

For some occupations a short period of on-the-job training may be required in addition to or instead of the formal qualification. In some instances no formal qualification or on-the-job training may be required.

Tasks include:

- loading, unloading and transporting stock and equipment
- replenishing vending machines with stock
- clearing money from machines, accounting for money collected, and checking monitoring systems
- keeping stock records, and machine maintenance and repair records
- may test vending machines' dispensing, coin-handling, electrical, refrigeration, carbonation and ice-making systems
- may adjust and repair vending machines and replace defective mechanical and electrical parts using hand tools and soldering-irons

Occupation:

899711 Vending Machine Attendant

899711 VENDING MACHINE ATTENDANT*Alternative Title:*

Vending Machine Refiller

Stocks and maintains vending and amusement machines and collects money from coin boxes.

Skill Level: 5*Specialisation:*

Poker Machine Attendant

UNIT GROUP 8999 OTHER MISCELLANEOUS LABOURERS

This unit group covers Labourers not elsewhere classified.

It includes Bicycle Mechanics, Car Park Attendants, Crossing Supervisors, Electrical or Telecommunications Trades Assistants, Leaflet or Newspaper Deliverers, Mechanic's Assistants, Railways Assistants, Sign Erectors, Ticket Collectors or Users, and Trolley Collectors.

Indicative Skill Level:

Most occupations in this unit group have a level of skill commensurate with the qualifications outlined below.

In Australia:

MQF Certificate I, or compulsory secondary education (ANZSCO Skill Level 5)

In New Zealand:

NZ Register Level 1 qualification, or compulsory secondary education (ANZSCO Skill Level 5)

For some occupations a short period of on-the-job training may be required in addition to or instead of the formal qualification. In some instances no formal qualification or on-the-job training may be required.

Occupations:

- 899911 Bicycle Mechanic
- 899912 Car Park Attendant
- 899915 Crossing Supervisor
- 899914 Electrical or Telecommunications Trades Assistant
- 899915 Leaflet or Newspaper Deliverer
- 899916 Mechanic's Assistant
- 899917 Railways Assistant
- 899918 Sign Erector
- 899921 Ticket Collector or User
- 899922 Trolley Collector
- 899999 Labourers nec.

899911 BICYCLE MECHANIC

Alternative Titles:

- Bicycle Repairer
- Bicycle Technician

Repairs and adjusts bicycles, and assembles bicycle kits.

Skill Level: 5

899912 CAR PARK ATTENDANT

Operates and maintains a car parking facility by guarding cars in parking areas and collecting fees at car park entry or exit points. May drive and park cars, and operate boom gates.

Skill Level: 5

899913 CROSSING SUPERVISOR

Assists children, disabled and other pedestrians to cross roads by stopping traffic and ensuring all pedestrians have crossed safely before allowing traffic to flow through the crossing.

Skill Level: 5

UNIT GROUP 8999 OTHER MISCELLANEOUS LABOURERS *continued*

899914 ELECTRICAL OR TELECOMMUNICATIONS TRADES ASSISTANT

Assists Electrotechnology and Telecommunications Trades Workers to install and maintain electrical and telecommunications systems.

Skill Level: 5

899915 LEAFLET OR NEWSPAPER DELIVERER

Collects leaflets or newspapers from a collection point and delivers them to homes in a specified area.

Skill Level: 5

899916 MECHANIC'S ASSISTANT

Assists Motor Mechanics to replace and repair worn and defective parts, re-assemble mechanical components, change oil and filters, and perform other routine mechanical tasks.

Skill Level: 5

Specialisation:

Lube Attendant

899917 RAILWAYS ASSISTANT

Assists with operating and maintaining facilities at a railway station by updating platform indicators showing train times and destinations, collecting and checking passenger tickets, giving signals for train departures, and cleaning station facilities.

Skill Level: 5

899918 SIGN ERECTOR

Erects and installs signs, and cleans signs and their sites after installation.

Skill Level: 5

899921 TICKET COLLECTOR OR USHER

Alternative Title:

Venue Attendant

Collects tickets or admission passes and ushers patrons to their seats at an entertainment, sporting or recreational venue, prepares the venue before an event and locks up premises afterwards.

Skill Level: 5

Specialisations:

Entertainment Usher

Gatekeeper

Turnstile Attendant

899922 TROLLEY COLLECTOR

Collects supermarket trolleys from car parks and other areas, and returns them to the supermarket by hand or trailer. May drive a small tractor to tow the trolleys.

Skill Level: 5