



# MSM Manufacturing Training Package Implementation Guide Release 3.0

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*Prepared on behalf of the Process Manufacturing, Recreational Vehicle and Laboratory IRC for the Australian Industry and Skills Committee (AISC)*

These materials were developed by IBSA Manufacturing SSO in association with the Commonwealth Government through the Department of Education and Training

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## Introduction

### Who is this guide for?

The MSM Companion Volume Implementation Guide is designed to support the implementation of the MSM Manufacturing Training Package Version 3.0. It has been developed to assist RTOs to meet the requirements of the Standards for RTOs.

### MSM Version control and modification history

TP Release	Status	Release date	Approval process
3.0	Current	## June 2018	Endorsement
2.1	Replaced	12 January 2017	IRC upgrade
2.0	Replaced	2 June 2016	Endorsement
1.0	Replaced	15 December 2015	Endorsement

### MSM Modification history details

#### MSM Release 3.0 - endorsement

1 new qualification, 36 new units and 6 imported units added to MSM Training Package.

#### Notes re MSA07 components

Previous releases of the MSM Manufacturing Training Package have not totally replaced or superseded MSA07. Four Manufacturing Technology qualifications and 35 MSATC units of competency are to be progressively reviewed for inclusion in MEM Manufacturing and Engineering Training Package. Refer to list in Appendix B for mapping information.

## MSM Training Package mapping of changes

### MSM Release 3 - changes to qualifications

E = equivalent N = Not equivalent

MSM Release 3			
Code	Title	Comment	E/N
MSM30318	Certificate III in Manufactured Mineral Products	Release 1. New qualification. Supersedes and is equivalent to PMC30116 Certificate III in Manufactured Mineral Products.	E

## MSM Release 3 – changes to units of competency

E = equivalent N = Not equivalent

MSM Release 3			
Code	Title	Comment	E/N
MSMPMC200	Organise self	Release 1. New unit. Supersedes and is equivalent to PMC561080 Organise self	E
MSMPMC300	Produce structural precast concrete	Release 1. New unit. Supersedes and is equivalent to PMC553051 Produce structural precast concrete	E
MSMPMC301	Store materials for production	Release 1. New unit. Supersedes and is equivalent to PMC561072 Store materials for production	E
MSMPMC302	Operate equipment to blend/mix materials	Release 1. New unit. Supersedes and is equivalent to PMC552002 Operate equipment to blend/mix materials	E
MSMPMC303	Operate grinding equipment	Release 1. New unit. Supersedes and is equivalent to PMC552003 Operate grinding equipment	E
MSMPMC304	Prepare for production	Release 1. New unit. Supersedes and is equivalent to PMC552004 Prepare for production	E
MSMPMC305	Heat accelerate the curing of precast concrete	Release 1. New unit. Supersedes and is equivalent to PMC552007 Heat accelerate the curing of precast concrete	E
MSMPMC306	Operate crushing equipment	Release 1. New unit. Supersedes and is equivalent to PMC552008 Operate crushing equipment	E
MSMPMC307	Operate a calcining kiln	Release 1. New unit. Supersedes and is equivalent to PMC552010 Operate a calcining kiln	E
MSMPMC308	Operate slip casting equipment	Release 1. New unit. Supersedes and is equivalent to PMC552020 Operate slip casting equipment	E
MSMPMC309	Finish products after firing	Release 1. New unit. Supersedes and is equivalent to PMC552023 Finish products after firing	E
MSMPMC310	Hand mould products	Release 1. New unit. Supersedes and is equivalent to PMC552024 Hand mould products	E
MSMPMC311	Operate a firing kiln	Release 1. New unit. Supersedes and is equivalent to PMC552030 Operate a firing kiln	E
MSMPMC312	Operate glass finishing equipment	Release 1. New unit. Supersedes and is equivalent to PMC552048 Operate glass finishing equipment	E
MSMPMC313	Schedule, cut and bend reinforcement	Release 1. New unit. Supersedes and is equivalent to PMC552050 Schedule, cut and bend reinforcement	E
MSMPMC314	Finish green concrete products	Release 1. New unit. Supersedes and is equivalent to PMC552051 Finish green concrete products	E
MSMPMC315	Cast moulded concrete products	Release 1. New unit. Supersedes and is equivalent to PMC552052 Cast moulded concrete products	E
MSMPMC316	Finish cured concrete products	Release 1. New unit. Supersedes and is equivalent to PMC552053 Finish cured concrete products	E
MSMPMC317	Conduct benching operations	Release 1. New unit. Supersedes and is equivalent to PMC552055 Conduct benching operations	E
MSMPMC318	Assemble, fabricate and place reinforcement	Release 1. New unit. Supersedes and is equivalent to PMC552056 Assemble, fabricate and place reinforcement	E
MSMPMC319	Finish casting operation	Release 1. New unit. Supersedes and is equivalent to PMC552057 Finish casting operation	E
MSMPMC320	Demould concrete products	Release 1. New unit. Supersedes and is equivalent to PMC552058 Demould concrete products	E
MSMPMC321	Batch mix concrete	Release 1. New unit. Supersedes and is equivalent to PMC552060 Batch mix concrete	E
MSMPMC322	Deliver concrete to site	Release 1. New unit. Supersedes and is equivalent to	E

		PMC552061 Deliver concrete to site	
MSMPMC323	Prepare asphalt	Release 1. New unit. Supersedes and is equivalent to PMC552065 Prepare asphalt	E
MSMPMC324	Move materials	Release 1. New unit. Supersedes and is equivalent to PMC562070 Move materials	E
MSMPMC325	Operate bulk materials handling equipment	Release 1. New unit. Supersedes and is equivalent to PMC562071 Operate bulk materials handling equipment	E
MSMPMC326	Deliver customer service	Release 1. New unit. Supersedes and is equivalent to PMC562081 Deliver customer service	E
MSMPMC327	Allocate and complete team tasks	Release 1. New unit. Supersedes and is equivalent to PMC562083 Allocate and complete team tasks	E
MSMPMC328	Prepare for and apply shotcrete for installation	Release 1. New unit. Supersedes and is equivalent to PMC552094 Prepare for and apply shotcrete for installation	E
MSMPMC329	Prepare moulds and dies	Release 1. New unit. Supersedes and is equivalent to PMC553020 Prepare moulds and dies	E
MSMPMC330	Produce architectural precast concrete	Release 1. New unit. Supersedes and is equivalent to PMC553050 Produce architectural precast concrete	E
MSMPMC400	Carry out stock control	Release 1. New unit. Supersedes and is equivalent to PMC563081 Carry out stock control	E
MSMPMC401	Set up and tune a process	Release 1. New unit. Supersedes and is equivalent to PMC553000 Set up and tune a process	E
MSMPMC402	Process raw meal into product	Release 1. New unit. Supersedes and is equivalent to PMC553010 Process raw meal into product	E
MSMPMC403	Set up and optimise glass forming process	Release 1. New unit. Supersedes and is equivalent to PMC553040 Set up and optimise glass forming process	E

### MSM Release 3 – additional imported units of competency

- PMAOPS101 Read dials and indicators
- CPMCCM1016A Identify requirements for safe tilt-up work
- MSAPMSUP201A Receive or despatch goods
- MSS402040 Apply 5S procedures
- MSS402051 Apply quality standards
- RIIMPO304D Conduct wheel loader operations

## Qualifications, Skill Sets and Units of Competency in MSM Training Package

### Qualifications

(Qualifications endorsed in Release 3)

Code	Title
MSM10116	Certificate I in Process Manufacturing
MSM10216	Certificate I in Manufacturing (Pathways)
MSM20116	Certificate II in Process Manufacturing
MSM20216	Certificate II in Manufacturing Technology
MSM21015	Certificate II in Recreational Vehicle Service and Repair
MSM21115	Certificate II in Recreational Vehicle Manufacturing
MSM30116	Certificate III in Process Manufacturing
MSM30216	Certificate III in Surface Preparation and Coating Application



<b>MSM30318</b>	<b>Certificate III in Manufactured Mineral Products</b>
MSM31015	Certificate III in Recreational Vehicle Service and Repair
MSM31115	Certificate III in Recreational Vehicle Manufacturing
MSM31215	Certificate III in Recreational Vehicle and Accessories Retailing
MSM40116	Certificate IV in Process Manufacturing
MSM41015	Certificate IV in Recreational Vehicles
MSM41115	Certificate IV in Recreational Vehicle and Accessories Retailing
MSM50316	Diploma of Production Management
MSM51015	Diploma of Recreational Vehicles

## Skill Sets

The Skill Sets listed below have been developed to meet regulatory and licensing requirements.

MSMSS00001	Licence to operate a standard boiler
MSMSS00002	Licence to operate an advanced boiler
MSMSS00003	Use high pressure water jetting equipment
MSMSS00004	Operate a high pressure water jetting system
MSMSS00005	Operate a drain cleaning system
MSMSS00006	Operate a vacuum loading system
MSMSS00007	Trade Measurement Inspection
MSMSS00008	Trade Measurement Verification (Complex Measuring Instrument)
MSMSS00009	Trade Measurement Verification (Limited Weighing Instrument)
MSMSS00010	Trade Measurement Verification (Liquid Measuring Instrument Using Volume Measures)
MSMSS00011	Trade Measurement Verification (Simple Measuring Instrument)
MSMSS00012	Trade Measurement Verification (Simple Measure)
MSMSS00013	Leading Hand/Supervisor
MSMSS00014	Confined Space Work

## MSM Units of competency

(Units endorsed in Release 3)

Unit code	Unit title	Prerequisites
MSMBLIC001	Licence to operate a standard boiler	
MSMBLIC002	Licence to operate an advanced boiler	
MSMENV172	Identify and minimise environmental hazards	
MSMENV272	Participate in environmentally sustainable work practices	
MSMENV472	Implement and monitor environmentally sustainable work practices	
MSMENV672	Develop workplace policy and procedures for environmental sustainability	
MSMOPS100	Use equipment	
MSMOPS101	Make measurements	
MSMOPS102	Perform tasks to support production	
MSMOPS200	Operate equipment	
MSMOPS201	Cut polymer materials	
MSMOPS202	Fabricate polymer products	
MSMOPS212	Use organisation computers or data systems	
MSMOPS244	Lay out and cut materials	
MSMOPS301	Treat corrosion	
MSMOPS363	Organise on-site work	



MSMOPS400	Optimise process/plant area	
MSMOPS401	Trial new process or product	
MSMOPS601	Design equipment and system modifications	
MSMPCI101	Adapt to work in industry	
MSMPCI103	Demonstrate care and apply safe practices at work	
MSMPCII296	Make a small furniture item from timber	
MSMPCII297	Make an object from cloth using an existing pattern	
MSMPCII298	Make an object from metal	
MSMPCII299	Make an object from plastic	
MSMPER200	Work in accordance with an issued permit	
MSMPER201	Monitor and control work permits	
MSMPER202	Observe permit work	
MSMPER205	Enter confined space	MSMPER200
MSMPER300	Issue work permits	MSMWHS201
MSMPER400	Coordinate permit process	MSMPER300
MSMPMC200	Organise self	
MSMPMC300	Produce structural precast concrete	
MSMPMC301	Store materials for production	
MSMPMC302	Operate equipment to blend/mix materials	
MSMPMC303	Operate grinding equipment	
MSMPMC304	Prepare for production	
MSMPMC305	Heat accelerate the curing of precast concrete	
MSMPMC306	Operate crushing equipment	
MSMPMC307	Operate a calcining kiln	
MSMPMC308	Operate slip casting equipment	
MSMPMC309	Finish products after firing	
MSMPMC310	Hand mould products	
MSMPMC311	Operate a firing kiln	
MSMPMC312	Operate glass finishing equipment	
MSMPMC313	Schedule, cut and bend reinforcement	
MSMPMC314	Finish green concrete products	
MSMPMC315	Cast moulded concrete products	
MSMPMC316	Finish cured concrete products	
MSMPMC317	Conduct benching operations	
MSMPMC318	Assemble, fabricate and place reinforcement	
MSMPMC319	Finish casting operation	
MSMPMC320	Demould concrete products	
MSMPMC321	Batch mix concrete	
MSMPMC322	Deliver concrete to site	
MSMPMC323	Prepare asphalt	
MSMPMC324	Move materials	
MSMPMC325	Operate bulk materials handling equipment	
MSMPMC326	Deliver customer service	
MSMPMC327	Allocate and complete team tasks	
MSMPMC328	Prepare for and apply shotcrete for installation	
MSMPMC329	Prepare moulds and dies	
MSMPMC330	Produce architectural precast concrete	
MSMPMC400	Carry out stock control	
MSMPMC401	Set up and tune a process	
MSMPMC402	Process raw meal into product	MSMPMC307
MSMPMC403	Set up and optimise glass forming process	
MSMRV310	Fit recreational vehicle floor	
MSMRV311	Fit furniture in a recreational vehicle	
MSMRV312	Fit water systems in a recreational vehicle	
MSMRV313	Fit 12 V cable systems in a recreational vehicle	

MSMRV314	Construct and fit roof to a recreational vehicle	
MSMRV315	Construct and fit slide out in a recreational vehicle	
MSMRV316	Fit appliances in a recreational vehicle	
MSMRV317	Install solar equipment on a recreational vehicle	
MSMRV318	Fit cladding to a recreational vehicle	
MSMRV319	Fit front and rear moulds to a recreational vehicle	
MSMRV320	Fit windows and doors to a recreational vehicle	
MSMRV321	Fit required external items to a recreational vehicle	
MSMRV322	Fit required external electrical components to a recreational vehicle	
MSMRV323	Fit required internal items to a recreational vehicle	
MSMRV324	Conduct final quality inspection for a recreational vehicle	
MSMRV325	Fabricate a chassis and suspension for a recreational vehicle	
MSMRV350	Remove and replace a recreational vehicle roof	
MSMRV351	Remove and replace a recreational vehicle floor	
MSMRV352	Remove and replace a recreational vehicle sidewall cladding	
MSMRV353	Remove and replace a recreational vehicle shower cubicle	
MSMRV354	Remove and replace a recreational vehicle shower walls	
MSMRV355	Remove and replace a camper/pop-top roof	
MSMRV356	Remove and replace a gas struts and roof lifting equipment on a recreational vehicle	
MSMRV357	Remove and replace external components of a recreational vehicle	
MSMRV358	Modify the body of a recreational vehicle	
MSMRV359	Install additional appliances in a recreational vehicle	
MSMRV360	Service camper wind up systems	
MSMRV361	Repair dry rot in a recreational vehicle	
MSMRV362	Install and repair battery systems in a recreational vehicle	
MSMRV363	Complete pre-delivery check of a recreational vehicle	
MSMRV364	Hand over a recreational vehicle to a customer	
MSMRV365	Remove and refit body moulding	
MSMRV366	Fit transfers and decals to a recreational vehicle	
MSMRVG201	Tow a recreational vehicle safely	
MSMRVS202	Repair/service LPG systems in a recreational vehicle	
MSMRVS401	Assess and quote to service a recreational vehicle	
MSMRVT201	Apply technical knowledge of recreational vehicle manufacturing to work activities	
MSMSUP100	Apply workplace context to own job	
MSMSUP101	Clean workplace or equipment	
MSMSUP102	Communicate in the workplace	
MSMSUP106	Work in a team	
MSMSUP200	Achieve work outcomes	
MSMSUP204	Pack products or materials	
MSMSUP205	Transfer loads	
MSMSUP210	Process and record information	
MSMSUP230	Monitor process operations	
MSMSUP240	Undertake minor maintenance	
MSMSUP273	Handle goods	
MSMSUP280	Manage conflict at work	
MSMSUP291	Participate in continuous improvement	
MSMSUP292	Sample and test materials and product	
MSMSUP300	Identify and apply process improvements	
MSMSUP301	Apply HACCP to the workplace	
MSMSUP303	Identify equipment faults	
MSMSUP309	Maintain and organise workplace records	
MSMSUP310	Contribute to the development of workplace documentation	
MSMSUP330	Develop and adjust a production schedule	
MSMSUP382	Provide coaching/mentoring in the workplace	

MSMSUP383	Facilitate a team	
MSMSUP390	Use structured problem solving tools	
MSMSUP400	Develop and monitor quality systems	
MSMSUP404	Coordinate maintenance	
MSMSUP405	Identify problems in fluid power system	
MSMSUP406	Identify faults in electronic control	
MSMTMINS301	Inspect a range of simple measures	
MSMTMINS302	Inspect a range of simple measuring instruments	
MSMTMINS401	Inspect a range of weighing instruments	
MSMTMINS402	Inspect liquid measuring instruments using volume measures	
MSMTMINS403	Inspect a range of trading practices	
MSMTMINS404	Inspect a range of pre-packaged products	
MSMTMINS501	Inspect a range of complex measuring instruments	
MSMTMREF301	Use and maintain reference standards	
MSMTMVER301	Verify simple measures	
MSMTMVER302	Verify simple measuring instruments	
MSMTMVER401	Verify weighing instruments	
MSMTMVER402	Verify liquid measuring instruments using volume measures	
MSMTMVER403	Verify inspector's class reference standards	
MSMTMVER501	Verify complex measuring instruments	
MSMWHS100	Follow WHS procedures	
MSMWHS110	Follow emergency response procedures	
MSMWHS200	Work safely	
MSMWHS201	Conduct hazard analysis	
MSMWHS205	Control minor incidents	
MSMWHS210	Undertake first response to non-fire incidents	
MSMWHS212	Undertake first response to fire incidents	
MSMWHS216	Operate breathing apparatus	
MSMWHS217	Gas test atmospheres	
MSMWHS218	Control the risks of falls	
MSMWHS300	Facilitate the implementation of WHS for a work group	MSMWHS200
MSMWHS400	Contribute to WHS management system	
MSMWHS401	Assess risk	
MSMWHS503	Maintain WHS management system	
MSMWHS510	Manage risk	
MSMWHS601	Develop WHS management system	
MSMWJ201	Use high pressure water jetting equipment	
MSMWJ301	Operate a high pressure water jetting system	
MSMWJ302	Operate a drain cleaning draining system	
MSMWJ303	Operate a vacuum loading system	

## Imported units of competency – Releases 1, 2 and 3

(Additional imported units included in Release 3)

Unit code	Unit title	Prerequisites
AUMANA001	Prepare and document quotations	
AUMFTA001	Document manufacturing design processes	
AUMGTT001	Apply trim to vehicle components	
AURAAA002	Determine retail rates for automotive products and services	
AURACA001	Respond to customer needs and enquiries in an automotive workplace	
AURACA002	Manage complex customer requirements in an automotive workplace	

AURACA003	Build customer relations in an automotive workplace	
AURFA004	Resolve routine problems in an automotive workplace	
AURFA007	Develop and document specifications and procedures	
AURAKA002	Adapt work processes to new technologies in an automotive workplace	
AURALA001	Comply with legal aspects of a service and repair contract in an automotive workplace	
AURAMA004	Maintain business image in an automotive workplace	
AURAMA005	Manage complex customer issues in an automotive workplace	
AURAMA006	Contribute to planning and implementing business improvement in an automotive workplace	
AURANN001	Estimate and quote automotive body repairs	
AURATA005	Estimate and quote automotive mechanical and electrical repairs	
AURC341903A	Apply relevant finance, leasing and insurance contracts/policies	
AURETB001	Diagnose and repair electric braking systems	
AURETR012	Test and repair basic electrical circuits	
AURETR015	Inspect, test and service batteries	
AURSAA001	Process customer complaints in an automotive workplace	
AURSBA3002	Identify and match uncommon automotive parts	
AURSCA001	Select and supply automotive parts and products	
AURSCA002	Present automotive products and services for sale	
AURSCA003	Apply sales procedures in an automotive workplace	
AURSCA004	Carry out cash and non-cash payment operations	
AURSCA005	Sell automotive products and services	
AURSCA006	Promote automotive products and services	
AURSLA001	Comply with legal requirements when selling automotive products and services	
AURTNA001	Estimate and quote automotive vehicle or machinery modifications	
AURTTA017	Carry out vehicle safety inspections	
AURTTB001	Inspect and service braking systems	
AURTTD004	Inspect and service suspension systems	
AURTTJ002	Remove, inspect and refit wheel hubs and associated brake components	
AURTTY001	Repair vehicle chassis, frame and associated components	
AURV365356A	Read and interpret vehicle body repair estimation/quotation	
AURVTG011	Install side vehicle windows	
AURVTN032	Inspect vehicle damage and determine repair procedures	
AURVTS004	Repair vehicle composite material components	
AURVTT015	Fabricate and install canvas products for automotive and marine components	
AURVTT019	Fabricate and install automotive and marine frames, canopies and side curtains	
AURVTT3016	Fabricate frame structures	
BSBADM502	Manage meetings	
BSBCUS501	Manage quality customer service	
BSBFIM501	Manage budgets and financial plans	
BSBINM501	Manage an information or knowledge management system	
BSBLDR402	Lead effective workplace relationships	
BSBLED401	Develop teams and individuals	
BSBMGT401	Show leadership in the workplace	
BSBMGT403	Implement continuous improvement	

BSBMGT502	Manage people performance	
BSBMGT605	Provide leadership across the organisation	
BSBWHS401	Implement and monitor WHS policies, procedures and programs to meet legislative requirements	
BSBWRK510	Manage employee relations	
BSBWRT401	Write complex documents	
CPCPCM1016A	Identify requirements for safe tilt-up work	
CPCPCM2043A	Carry out WHS requirements	
CPCPGS3046A	Install LPG systems in caravans, mobile homes and mobile workplaces	CPCPCM2043A
FNSORG501	Develop and manage a budget	
FPICOT2238	Cut materials with a hand-held chainsaw	
HLTAID003	Provide first aid	
LMTCL2001B	Use a sewing machine	
LMTCL2003B	Identify fibres and fabrics	
LMTCL2006B	Press work	
LMTCL2007B	Lay up, mark and cut uncomplicated fabrics and lays	
LMTCL2008B	Finish garment production	LMTCL2003B
LMTGN2008B	Coordinate work of team/section	
MEM03001B	Perform manual production assembly	
MEM03006B	Set assembly stations	MEM03001B MEM18001C MEM03003B MEM18002B MEM03004B
MEM05005B	Carry out mechanical cutting	MEM12023A MEM18001C
MEM05007C	Perform manual heating and thermal cutting	
MEM05012C	Perform routine manual metal arc welding	
MEM05050B	Perform routine gas metal arc welding	
MEM07001B	Perform operational maintenance of machines/equipment	MEM18001C
MEM07024B	Operate and monitor machine/process	
MEM07028B	Operate computer controlled machines/processes	MEM07024B
MEM08002C	Pre-treat work for subsequent surface coating	MEM13003B
MEM08007B	Control surface finish production and finished product quality	
MEM08011B	Prepare surfaces using solvents and/or mechanical means	MEM13003B MEM18001C MEM18002B
MEM08012B	Prepare surfaces by abrasive blasting (basic)	MEM08016B MEM13003B
MEM08013B	Prepare surfaces by abrasive blasting (advanced)	MEM08012B MEM08016B MEM13003B
MEM08014B	Apply protective coatings (basic)	MEM13003B
MEM08015B	Apply protective coatings (advanced)	MEM08014B MEM13003B
MEM08016B	Control blast coating by-products, materials and emissions	MEM13003B
MEM09002B	Interpret technical drawing	
MEM09009C	Create 2D drawings using computer-aided design (CAD) system Create 2D drawings using computer aided design system	MEM09002B MEM16008A
MEM09204A	Produce basic engineering detail drawings	MEM09002B
MEM09210A	Create 3-D solid models using computer-aided design (CAD) system	MEM09002B MEM30031A
MEM10002B	Terminate and connect electrical wiring	MEM09002B

		MEM12002B MEM18001C
MEM11001C	Erect/dismantle scaffolding and equipment	MEM18001C
MEM11002C	Erect/dismantle complex scaffolding and equipment	MEM11001C MEM18001C
MEM11003B	Coordinate erection/dismantling of complex scaffolding/equipment	MEM11001C MEM11002C MEM18001C
MEM11004B	Undertake dogging	MEM18001C
MEM11005B	Pick and process order	
MEM11006B	Perform production packaging	
MEM11007B	Administer inventory procedures	
MEM11010B	Operate mobile load shifting equipment	
MEM11011B	Undertake manual handling	
MEM11012B	Purchase materials	
MEM11015B	Manage warehouse inventory system	MEM11007B MEM15002A
MEM11016B	Order materials	
MEM11017B	Organise and lead stocktakes	MEM11007B
MEM11021B	Perform advanced operation of load shifting equipment	MEM11010B
MEM11022B	Operate fixed/moveable load shifting equipment	
MEM12001B	Use comparison and basic measuring devices	
MEM12002B	Perform electrical/electronic measurement	
MEM12023A	Perform engineering measurements	
MEM12024A	Perform computations	
MEM13001B	Perform emergency first aid	
MEM13002B	Undertake occupational health and safety activities in the workplace	
MEM13003B	Work safely with industrial chemicals and materials	
MEM13010A	Supervise occupational health and safety in an industrial work environment	MEM13002B
MEM14001B	Schedule material deliveries	
MEM14002B	Undertake basic process planning	
MEM14003B	Undertake basic production scheduling	
MEM14004A	Plan to undertake a routine task	
MEM14005A	Plan a complete activity	
MEM15001B	Perform basic statistical quality control	
MEM15002A	Apply quality systems	
MEM15003B	Use improvement processes in team activities	MEM16007A
MEM15004B	Perform inspection	
MEM15005B	Select and control inspection processes and procedures	MEM15004B
MEM15024A	Apply quality procedures	
MEM16002C	Conduct formal interviews and negotiations	
MEM16003B	Provide advanced customer service	
MEM16005A	Operate as a team member to conduct manufacturing, engineering or related activities	
MEM16006A	Organise and communicate information	
MEM16007A	Work with others in a manufacturing, engineering or related environment	
MEM16008A	Interact with computing technology	
MEM16009A	Research and analyse engineering information	MEM16006A MEM16012A
MEM16011A	Communicate with individuals and small groups	MEM16006A

MEM16012A	Interpret technical specifications and manuals	
MEM16013A	Operate in a self-directed team	MEM16007A
MEM17001B	Assist in the development and delivery of training in the workplace	
MEM17003A	Assist in the provision of on the job training	
MEM18001C	Use hand tools	
MEM18002B	Use power tools/hand held operations	
MEM18038B	Maintain wheels and tyres	MEM18001
MEM18045B	Fault find/repair electrical equipment/components up to 250 volts single phase supply	MEM09002B MEM10002B MEM12002B MEM12023A MEM18001C MEM18002B
MEM22015A	Source and estimate engineering materials requirements	
MEM30013A	Assist in the preparation of a basic workplace layout	
MEM30031A	Operate computer-aided design (CAD) system to produce basic drawing elements	
MSAPMSUP201A	Receive or despatch goods	
MSFFM1002	Operate basic woodworking machines	
MSFFM2001	Use furniture making sector hand and power tools	
MSFFM2002	Assemble furnishing components	
MSFFM2003	Select and apply hardware	
MSFFM2005	Join solid timber	
MSFSF1001	Produce basic soft furnishings accessories	
MSFSF2001	Cut single layer fabrics	
MSL936001A	Maintain quality system and continuous improvement processes within work or functional area	
MSL973001A	Perform basic tests	
MSL974003A	Perform chemical tests and procedures	
MSS015002A	Develop strategies for more sustainable use of resources	
MSS015015A	Evaluate sustainability impact of a process	
MSS402001A	Apply competitive systems and practices	
MSS402002A	Sustain process improvements	
MSS402010A	Manage the impact of change on own work	
MSS402020A	Apply quick changeover procedures	
MSS402021A	Apply Just in Time procedures	
MSS402030A	Apply cost factors to work practices	
MSS402031A	Interpret product costs in terms of customer requirements	
MSS402040	Apply 5S procedures	
MSS402040A	Apply 5S procedures (remains valid for Release 2.1 components)	
MSS402050A	Monitor process capability	
MSS402051	Apply quality standards	
MSS402051A	Apply quality standards (remains valid for Release 2.1 components)	
MSS402060A	Use planning software systems in operations	
MSS402080A	Undertake root cause analysis	
MSS402081A	Contribute to the application of a proactive maintenance strategy	
MSS403002A	Ensure process improvements are sustained	
MSS403010A	Facilitate change in an organisation implementing competitive systems and practices	
MSS403011A	Facilitate implementation of competitive systems and practices	
MSS403013A	Lead team culture improvement	
MSS403021A	Facilitate a Just in Time system	



MSS403030A	Improve cost factors in work practices	
MSS403040A	Facilitate and improve implementation of 5S	
MSS403041A	Facilitate breakthrough improvements	
MSS403051A	Mistake proof an operational process	
MSS404050A	Undertake process capability improvements	MSS404052A
MSS404052A	Apply statistics to operational processes	
MSS404060A	Facilitate the use of planning software systems in a work area or team	
MSS404081A	Undertake proactive maintenance analyses	
MSS404082A	Assist in implementing a proactive maintenance strategy	
MSS405003A	Manage a value stream	
MSS405011A	Manage people relationships	
MSS405012A	Manage workplace learning	
MSS405022A	Design a process layout	
MSS405030A	Optimise cost of product or service	
MSS405031A	Undertake value analysis of a product or process costs in terms of customer requirements	
MSS405032A	Analyse cost implications of maintenance strategy	
MSS405041A	Implement improvement systems in an organisation	
MSS405050A	Determine and improve process capability	MSS404052A
MSS405053A	Manage application of six sigma for process control and improvement	MSS404052A
MSS405060A	Develop the application of enterprise control systems in an organisation	
MSS405061A	Determine and establish information collection requirements and processes	
MSS405070A	Develop and manage sustainable energy practices	
MSS405075A	Facilitate the development of a new product	MSS404052A
MSS405081A	Develop a proactive maintenance strategy	
MSS405081A	<i>Develop a proactive maintenance strategy</i>	
MSS405082A	Adapt a proactive maintenance strategy to the process operations sector	MSS405081A
PMAOMIR407	Audit incident preparedness and established response systems	
PMAOMIR418	Coordinate incident response	
PMAOMIR424	Develop and maintain community relationships	
PMAOMIR430	Conduct and assess incident exercises	
PMAOMIR444	Develop incident containment tactics	
PMAOMIR449	Monitor legal compliance obligations during incidents	
PMAOPS101	Read dials and indicators	
PMAOPS105	Select and prepare materials	
PMAOPS280	Interpret process plant schematics	
PMAOPS402	Respond to abnormal process situations	
PMAOPS405	Operate complex control systems	
PMAOPS410	Monitor remote production facilities	
PMAOPS411	Manage plant shutdown and restart	
PMAOPS433	Manage wells and gathering systems	
PMAOPS434	Commission wells and gathering systems	
PMAOPS450	Solve colour problems	
PMAOPS460	Monitor and operate tailings management facilities	
PMAOPS500	Optimise production systems	
PMASUP410	Develop plant documentation	
PMASUP420	Minimise environmental impact of process	

PMASUP432	Coordinate pipeline projects	
PMASUP440	Commission/recommission plant	
PMASUP441	Decommission plant	
PMASUP444	Plan plant preparation and isolation	
PMASUP445	Participate in HAZOP studies	PMAOPS280B
PMASUP520	Review procedures to minimise environmental impact of process	
PMASUP620	Manage environmental management system	
PMAWHS420	Develop first aid procedures and manage resources	
PMBFIN201C	Finish products and components	
PMBFIN205C	Hand decorate products	
PMBHAN103C	Shift materials safely by hand	
PMBPREP205C	Assemble materials and equipment for production	
PMBPREP206C	Prepare materials to formulae	
PMBPREP304C	Set a die	
PMBPROD236C	Operate hand held air/power equipment for production processes	
PMBPROD240C	Cut materials	
PMBPROD241C	Lay up rubber lining or lag pulleys	
PMBPROD242A	Bond polymers to surfaces	
PMBPROD247C	Hand lay up composites	
PMBPROD248C	Prepare surfaces for coating	
PMBPROD265C	Operate portable vulcanising equipment	
PMBPROD280B	Operate resin-glass depositor equipment	
PMBPROD323C	Produce powder coated products	
PMBPROD347B	Produce composites using hand lamination	PMBPROD247C
PMBPROD375B	Vulcanise products using an autoclave	
PMBPROD380B	Produce composites using chopper/gun depositor	PMBPROD280A
PMBPROD430B	Trial a new die/tool	
PMBPROD431B	Trial a new, advanced or complex mould	
PMBTECH301B	Use materials and process knowledge to solve problems	
PMBTECH401B	Predict polymer properties and characteristics	PMBTECH301B
PMBTECH402B	Set advanced or complex dies	PMBPREP304C
PMBTECH403B	Test fibre-composites materials and laminates	
PMBTECH404B	Mould chemical resistant and/or fire retardant fibre-composites	PMBPROD347B OR PMBPROD380B
PMBTECH405B	Repair damaged fibre-composites structures	
PMBTECH406BA	Diagnose production equipment problems	
PSPGEN029	Value diversity	
PSPHRM004	Implement workforce planning and succession strategies	
PSPPM402B	Manage simple projects	
PSPPM501B	Design complex projects	
PSPPM502B	Manage complex projects	
PSPPM503B	Close complex projects	
RIIMPO304D	Conduct wheel loader operations	
SIRRMER003	Coordinate visual merchandising activities	
SIRXINV004A	Buy merchandise	
SIRXMER004A	Manage merchandise and store presentation	
SIRXPDK001	Advise on products and services	
SIRXPDK001	Advise on products and services	
SIRXRSK001A	Minimise theft	
SIRXRSK002	Maintain store security	

SIRXSL002	Follow point-of-sale procedures	
SITXMGT002	Establish and conduct business relationships	
SITXMPR001	Coordinate production of brochures and marketing materials	
SITXMPR002	Create a promotional display or stand	
SITXMPR004	Coordinate marketing activities	
TAEASS401	Plan assessment activities and processes	
TAEASS402	Assess competence	
TAEASS403	Participate in assessment validation	
TAEDL301	Provide work skill instruction	
TLIA5058	Manage facility and inventory requirements	
TLID2010	Operate a forklift	
TLIL4059	Implement asset management systems	
TLIL5055	Manage a supply chain	
TLIP4013	Implement and monitor logistics planning and process	
TLIR4003	Negotiate a contract	
TLIR4008	Implement and supervise stocktaking procedures	
TLIR4009	Implement purchasing systems	
TLIR4010	Plan purchasing	
TLIR5005	Manage a contract	
TLIR5006	Develop, implement and review purchasing strategies	
TLIX5015	Establish supply chains	
UEGNSG615A	Fill LPG gas cylinders	

## Mapping of MSM Release 3 to MSM Release 2

Detailed mapping and equivalence tables:

- Appendix A: Mapping of qualifications
- Appendix B: Mapping of units of competency

## Key work and training requirements

MSM Manufacturing Training Package includes qualifications and units of competency for a range of sectors of the manufacturing industry.

- Manufacturing (2 qualifications designed for delivery in schools)
- Process manufacturing (4 qualifications)
- Surface preparation and coating (1 qualification)
- Manufactured Mineral Products (1 qualification)
- Production management (1 qualification)
- Trade measurement (14 units of competency)
- Recreational vehicles (8 qualifications)
- High risk work boiler operations (2 units)
- Water jetting (4 units)

## Manufacturing

### *MSM10216 Certificate I in Manufacturing (Pathways)*

The Certificate I in Manufacturing (Pathways) provides a generic, cross manufacturing Certificate I designed for delivery in schools to:

- develop both employability and technical skills
- allow for selection of competency standards from a range of manufacturing Training Packages
- encourage collaborative delivery and assessment approaches
- map to existing qualifications
- include opportunities for recognition against existing qualifications
- provide a clear pathway into other Training Package qualifications and/or employment.

The Certificate I in Manufacturing (Pathways) also responds to the need to:

- provide pathways for individuals who have had limited access to formal vocational education and training
- ensure consistency with existing Certificate I qualifications
- ensure that employment related solutions are encouraged throughout the structure of the qualifications and that guideline materials provided are in alignment with licensing boundaries
- make employability and generic skills 'front and centre' in the development of qualifications
- provide opportunities for new pedagogical approaches and for local input.

### *MSM20216 Certificate II in Manufacturing Technology*

The MSM20216 Certificate II in Manufacturing Technology has been developed specifically for use as a VET in Schools program. It provides students with a set of competencies that collectively open up pathways into employment and/or further study.

## Process Manufacturing

### *MSM10116 Certificate I in Process Manufacturing*

### *MSM20116 Certificate II in Process Manufacturing*

### *MSM30116 Certificate III in Process Manufacturing*

### *MSM40116 Certificate IV in Process Manufacturing*

Process manufacturing is the production of goods that are typically produced in bulk quantities, as opposed to discrete and countable units. The industry sectors include:

- chemical, hydrocarbons and refining
- plastics, rubber and cabling
- manufactured mineral products.

The generic process manufacturing qualifications provide the competencies required by workers in manufacturing filling vital production support roles but who may not have the opportunity to develop competency in sufficient technical units related directly to producing products. They also apply to employees who operate across more than one category within process manufacturing or 'specialised processes' and elsewhere when required.

## Surface Preparation and Coating

### *MSM30216 Certificate III in Surface Preparation and Coating Application*

This qualification provides the trade-level competencies required to perform the wide range of surface preparation and protective coating application operations which occur across a range of typically heavy industry, ships and infrastructure.

The CSIRO estimates the cost of corrosion in Australia to be around \$13 billion per year. The major role for this sector is the control of corrosion and reduction of this significant cost. Protective coatings need to be applied to much of public infrastructure (e.g. bridges, pipelines), some modes of transport (e.g. ships, submarines), and many large public and private structures (e.g. hydrocarbon, chemical plants, off shore oil/gas platforms). All these items need to have their surfaces prepared correctly before beginning to apply the appropriate coating. Time between preparation and application is often critical to the overall success of the final product.

The increasingly technical nature of the protective coating and the need to undertake both adequate preparation and surface preparation safely and in an environmentally friendly manner has increased the need for this particular qualification. These technological advances have increased the life of the item, and the period between maintenance and the overall life. However, as surface preparation and coating becomes more technical, the ability to perform both correctly becomes more critical if the intended protection is to be achieved.

As much of this work is done 'on site' with routine only supervision, it is essential that the qualification equips the operator for this level of independent operation.

## Manufactured Mineral Products

### *MSM30318 Certificate III in Manufactured Mineral Products*

This qualification provides the competencies for operators working in manufactured mineral products industries who perform a range of operations to directly produce manufactured mineral products for industries, including cement, pre-cast concrete, pre-mixed concrete, quarry and asphalt.

This diverse industry typically interfaces with the extractive industries (e.g. mining, quarrying, blasting etc.) upstream, although some companies are specifically involved in the extractive industries. The industry primarily produces a range of products which are commonly used by other industries rather than directly consumed by the public. Downstream industries include building and construction (cement, concrete products, cement products), civil construction (cement, concrete products, asphalt), and landscaping industry (concrete blocks and pavers).

The *MSM30318 Certificate III in Manufactured Mineral Products* provides skills development for the following occupations:

- precast concrete technicians
- cement specialists (production and operations)
- plant operators
- plant technicians.

## Production Management

### *MSM50316 Diploma of Production Management*

This qualification provides the competencies required to plan, direct and coordinate production activities in a manufacturing environment. It applies to roles relating to improving production, such as production or operations managers.

This qualification provides skills that can be applied to the design and control of production systems within an organisation, including:

- planning and scheduling
- tracking and analysing and
- directing and operating.

## Trade Measurement

The 14 trade measurement units of competency (listed below) reflect current National Measurement Institute policies, regulations, procedures and work practices governing the activities of Trade Measurement Inspectors and Verifiers. They are available for use in specialist Trade Measurement Skill Sets below and are delivered by the National Measurement Institute.

### *MSMSS00007 Trade Measurement Inspection*

### *MSMSS00008 Trade Measurement Verification (Complex Measuring Instrument)*

### *MSMSS00009 Trade Measurement Verification (Limited Weighing Instrument)*

### *MSMSS00010 Trade Measurement Verification (Liquid Measuring Instrument Using Volume Measures)*

### *MSMSS00011 Trade Measurement Verification (Simple Measuring Instrument)*

### *MSMSS00012 Trade Measurement Verification (Simple Measure)*

Trade measurement refers to all transactions in which the price of the commodities or goods is based on measurement of quantity or quality. The primary purpose of a trade measurement system in Australia is to ensure that the pricing of traded goods is based on accurate measurement. Trade measurement covers both business-to-business transactions and business-to-consumer transactions. The units of competency listed below support the National Measurement Institute policies, regulations, procedures and work practices governing the activities of Trade Measurement Inspectors and Verifiers.

### *MSMTMINS301 Inspect a range of simple measures*

### *MSMTMINS302 Inspect a range of simple measuring instruments*

### *MSMTMINS401 Inspect a range of weighing instruments*

### *MSMTMINS402 Inspect liquid measuring instruments using volume measures*

### *MSMTMINS403 Inspect a range of trading practices*

### *MSMTMINS404 Inspect a range of pre-packaged products*

### *MSMTMINS501 Inspect a range of complex measuring instruments*

### *MSMTMREF301 Use and maintain reference standards*

### *MSMTMVER301 Verify simple measures*

### *MSMTMVER302 Verify simple measuring instruments*

### *MSMTMVER401 Verify weighing instruments*

### *MSMTMVER402 Verify liquid measuring instruments using volume measures*

### *MSMTMVER403 Verify inspector's class reference standards*

### *MSMTMVER501 Verify complex measuring instruments*

## Recreational Vehicles

*MSM21015 Certificate II in Recreational Vehicle Service and Repair*

*MSM21115 Certificate II in Recreational Vehicle Manufacturing*

*MSM31015 Certificate III in Recreational Vehicle Service and Repair*

*MSM31115 Certificate III in Recreational Vehicle Manufacturing*

*MSM31215 Certificate III in Recreational Vehicle and Accessories Retailing*

*MSM41015 Certificate IV in Recreational Vehicles*

*MSM41115 Certificate IV in Recreational Vehicle and Accessories Retailing*

*MSM51015 Diploma of Recreational Vehicles*

*MSM50316 Diploma of Production Management*

These 8 qualifications cover the qualifications required by the recreational vehicle manufacture, sales and service industry.

The recreational vehicle sector typically manufactures, repairs, services and retails recreational vehicles and accessories. Recreational vehicles include:

- motor homes
- caravans
- camper trailers
- slide-ons, and
- fifth wheelers.

Recreational vehicles may be made from a frame (timber, aluminium or steel) and skin (aluminium or fibre composite) or a manufactured wall panel or some other technology. They are typically mounted on a steel chassis. Fittings are typically timber/particle board but may be any other suitable material.

The scope of recreational vehicle 'manufacturing' occupations covers a broad spectrum. The skills profile of the manufacturing industry covers production workers, tradespeople, technicians and associate professionals as well as professionals. These are applied in the range of manufacturing from simply transformed to elaborately transformed materials.

The recreational vehicle sector supports increased access to training and resources and wants a sufficient broad base of skills to be maintained to allow for both flexibility in workforce deployment and also for portability of skills across the sector.

The recreational vehicle sector is growing and has wide regional coverage. It is highly concentrated in terms of manufacturing, but with a broad range of smaller manufacturers. Service and repair (and sales) tends to be many small and medium businesses, often with a formal relationship with a manufacturer.

## High Risk Boiler Licence

Operating a boiler is high risk work which requires a licence. This requires one of the following recognised Skills Sets:

*MSMSS00001 Licence to operate a standard boiler*

*MSMSS00002 Licence to operate an advanced boiler*

The following high risk licensing units have been developed for use in Skill Sets and importation to



relevant qualifications to meet the needs of boiler operators.

*MSMBLIC001 Licence to operate a standard boiler*

*MSMBLIC002 Licence to operate an advanced boiler*

## High Pressure Water jetting

This is not a traditional manufacturing sector, however it provides a valuable industrial service to the process manufacturing sector and is bound by many of the same requirements. Necessary training should occur in the operation of this high risk and hazardous equipment. The MSMWJ units of competency have been developed to meet the requirements for operators of high pressure water jetting equipment.

*MSMWJ201 Use high pressure water jetting equipment*

*MSMWJ301 Operate a high pressure water jetting system*

*MSMWJ302 Operate a drain cleaning draining system*

*MSMWJ303 Operate a vacuum loading system*

Two Skill Sets are also available:

*MSMSS00003 Use high pressure water jetting equipment*

*MSMSS00004 Operate a high pressure water jetting system.*

## Regulation and licensing requirements

While no specific licensing or certification requirements apply to the qualifications in this Training Package at the time of publication, manufacturing is governed by relevant legislation, regulations and/or external accreditation requirements. Local requirements should be checked, for example Worksafe Australia has a *Guide for managing risks from high pressure water jetting* <https://www.safeworkaustralia.gov.au/doc/guide-managing-risks-high-pressure-water-jetting>.

The National Measurement Institute is the regulator of the National Measurement Act and is the only RTO with scope to deliver the MSMTM units of competency.

The MSM Manufacturing Training Package also includes specialist high risk licensing units for boiler operations.

## Implementation information

This implementation information is provided to assist RTOs to develop their learning and assessment strategies to meet industry and student needs. It includes information on:

- choosing the appropriate qualification, skill set or unit of competency
- choosing electives as required
- supporting students
- delivering the training
- assessing students.

RTOs will need to implement a comprehensive training and assessment strategy for each program that they deliver.

## Choosing the appropriate qualification

Where do you start? What qualification and competencies are suitable for this industry sector and this student?

This section will assist Training Package users to develop their training and assessment strategies, customise the program to meet industry sector and student needs, identify the most suitable qualification for each student and apply the volume of learning to comply with the Australian Qualifications Framework (AQF).

## Career pathways

This section provides information about:

- career pathways into and out of each qualification. (There are no entry requirements for any of the MSM qualifications.)
- qualifications, occupational outcomes and the AQF.

The following table presents suggested pathways into and out of the MSM qualifications:

Note: there are three recreational vehicle pathways:

1. Recreational vehicle service and repair from Certificate II up to Diploma
2. Recreational vehicle manufacture from Certificate II up to Diploma
3. Recreational vehicle and accessories retailing from Certificate III up to Diploma.

Qualification	Pathway in	Pathway out
<b>Pathways and VET in Schools</b>		
MSM10216 Certificate I in Manufacturing (Pathways)	NA	MSM20116 Certificate II in Process Manufacturing
MSM20216 Certificate II in Manufacturing Technology	NA	MSA30208 Certificate III in Manufacturing Technology *
<b>Process Manufacturing</b>		
MSM10116 Certificate I in Process Manufacturing	NA	MSM20116 Certificate II in Process Manufacturing
MSM20116 Certificate II in Process Manufacturing	MSM10216 Certificate I in Manufacturing (Pathways)	MSM30116 Certificate III in Process Manufacturing
MSM30116 Certificate III in Process Manufacturing	MSM20116 Certificate II in Process Manufacturing	MSM40116 Certificate IV in Process Manufacturing
MSM40116 Certificate IV in Process Manufacturing	MSM30116 Certificate III in Process Manufacturing	MSM50316 Diploma of Production Management or MSS50312 Diploma of Competitive Systems and Practices
<b>Surface Coating and Preparation</b>		
MSM30216 Certificate III in Surface Preparation and Coating Application	NA	NA
<b>Manufactured Mineral Products</b>		
MSM30318 Certificate III in Manufactured Mineral Products	NA	MSM40116 Certificate IV in Process Manufacturing MSS40316 Certificate IV in Competitive Systems and

		Practices or BSB42015 Certificate IV in Leadership and Management
<b>Production Management</b>		
MSM50316 Diploma of Production Management	MSM40116 Certificate IV in Process Manufacturing	A degree program
<b>Recreational Vehicles</b>		
MSM21015 Certificate II in Recreational Vehicle Service and Repair	NA	MSM31015 Certificate III in Recreational Vehicle Service and Repair
MSM21115 Certificate II in Recreational Vehicle Manufacturing	NA	MSM31115 Certificate III in Recreational Vehicle Manufacture
MSM31015 Certificate III in Recreational Vehicle Service and Repair	MSM21015 Certificate II in Recreational Vehicle Service and Repair	MSM41015 Certificate IV in Recreational Vehicles.
MSM31115 Certificate III in Recreational Vehicle Manufacturing	MSM21115 Certificate II in Recreational Vehicle Manufacture	MSM41015 Certificate IV in Recreational Vehicles
MSM31215 Certificate III in Recreational Vehicle and Accessories Retailing	MSM21015 Certificate II in Recreational Vehicle Service and Repair or MSM21115 Certificate II in Recreational Vehicle Manufacture	MSM41015 Certificate IV in Recreational Vehicles
MSM41015 Certificate IV in Recreational Vehicles	MSM31015 Certificate III in Recreational Vehicle Service and Repair or MSM31115 Certificate III in Recreational Vehicle Manufacture	MSM51015 Diploma of Recreational Vehicles
MSM41115 Certificate IV in Recreational Vehicle and Accessories Retailing	MSM31215 Certificate III in Recreational Vehicle and Accessories Retailing	MSM51015 Diploma of Recreational Vehicles
MSM51015 Diploma of Recreational Vehicles	Credit may be granted towards this qualification for those units which may be in common with the MSM41015 Certificate IV in Recreational Vehicles or the MSM41115 Certificate IV in Recreational Vehicle and Accessories Retailing, however, the Diploma is essentially a stand-alone qualification	A degree program

## Qualifications, occupational outcomes and the AQF

RTOs must meet the requirements of the AQF and ensure that individual students are enrolled in appropriate qualifications. This section provides the AQF qualification descriptor and the MSM qualification description. This will assist RTOs to determine the most suitable qualification level for each student.

The AQF qualification descriptors include the volume of learning. RTOs must comply with the AQF, apply the volume of learning to training programs, and develop and implement training and assessment strategies that are consistent with the AQF.

The AQF provides the volume of learning allocated to a qualification. This includes all teaching, learning and assessment activities that are required to be undertaken by a typical student to

achieve the learning outcomes. These activities include guided learning (classes, lectures, tutorials, online or self-paced study), individual study, research, practice, learning activities in the workplace and assessment activities.

The amount of training provided by an RTO is part of the overall volume of learning and relates primarily to formal training and learning activities (including classes and other activities, as well as workplace learning).

RTOs must take into account the need to allow students to reflect on and absorb knowledge, to practise the skills in different contexts, and to learn to apply the skills and knowledge in the varied environments of workplaces before being assessed.

The following sections give the relevant AQF descriptor, including the volume of learning that is required, and the description of each MSM qualification.

## **Certificate I AQF descriptor**

### **Purpose**

The Certificate I qualifies individuals with basic functional knowledge and skills to undertake work, further learning and community involvement.

### **Knowledge**

Graduates of a Certificate I will have basic, fundamental knowledge and understanding in a narrow area of work and learning.

### **Skills**

Graduates of a Certificate I will have:

- basic skills to participate in everyday life and further learning
- cognitive and communication skills to receive, pass on and recall information in a narrow range of areas
- technical skills involving the use of tools appropriate to the activity and use of basic communication technologies

### **Application**

Graduates of a Certificate I will demonstrate the application of knowledge and skills:

- with some autonomy in defined contexts and within established parameters
- in contexts that may include preparation for further learning, life activities and/or a variety of initial routine and predictable work-related activities including participation in a team or work group.

### **Volume of learning**

The volume of learning Certificate II is typically 0.5 – 1 year. This equates to 600-1200 hours.

## **Certificate I qualification descriptions**

### **MSM10116 Certificate I in Process Manufacturing**

The MSM10116 Certificate I in Process Manufacturing provides the competencies required for entry to the industry and addresses job outcomes at this level. It has been developed as a common certificate for use across the three process manufacturing sectors:

- chemical, hydrocarbons and refining
- plastics, rubber and cabling
- manufactured mineral products.

### **MSM10216 Certificate I in Manufacturing (Pathways)**

The MSM10216 Certificate I in Manufacturing (Pathways) is designed to develop skills that are

essential for employment and skills that relate directly to a work activity as specified in a selected industry/technical unit.

The units selected must provide practical skills that are relevant and useful to the area in which the person hopes to gain employment or is currently working. The group of units should be chosen to support the project and should incorporate both the technical and employability skills needed for work.

Achievement of the MSM10216 Certificate I in Manufacturing (Pathways) will provide the student with a set of competencies that collectively open up pathways into employment and/or further study in the manufacturing industry.

## **Certificate II AQF descriptor**

### **Purpose**

The Certificate II qualifies individuals to undertake mainly routine work and as a pathway to further learning.

### **Knowledge**

Graduates of a Certificate II will have basic factual, technical and procedural knowledge in a defined area of work and learning.

### **Skills**

Graduates of a Certificate II will have:

- cognitive skills to access, record and act on a defined range of information from a range of sources
- cognitive and communication skills to apply and communicate known solutions to a limited range of predictable problems
- technical skills to use a limited range of equipment to complete tasks involving known routines and procedures with a limited range of options.

### **Application**

Graduates of a Certificate II will demonstrate the application of knowledge and skills with some accountability for the quality of own outcomes and some responsibility for own outputs in work and learning. Work involves limited autonomy and judgement in the completion of own defined and routine tasks in known and stable contexts and in collaboration with others in a team environment. **Volume of learning**

The volume of learning of a Certificate II is typically 0.5-1 year. This equates to 600-1200 hours.

## **Certificate II qualifications descriptions**

### **MSM20116 Certificate II in Process Manufacturing**

The MSM20116 Certificate II in Process Manufacturing provides the competencies required by competent production workers who undertake vital production support roles directly related to producing products.

Production workers apply a breadth and depth of knowledge to a defined range of situations and would be expected to apply this knowledge to solve a defined range of problems by applying known solutions to a limited range of predictable problems.

This qualification has been developed for use across the three process manufacturing sectors:

- chemical, hydrocarbons and refining
- plastics, rubber and cabling
- manufactured mineral products.

### **MSM20216 Certificate II in Manufacturing Technology**

The Certificate II in Manufacturing Technology applies to a learning and assessment environment where access to normal production operations is not available. A typical environment will be for application in a VET in Schools delivery environment or other simulated or trial manufacturing environment where a high degree of supervision exists. The units are suitable for delivery in a school environment and for schools to contextualise the units to local manufacturing industry activities.

### **MSM21015 Certificate II in Recreational Vehicle Service and Repair**

The MSM21015 Certificate II in Recreational Vehicle Service and Repair has been developed as an entry-level qualification. People with this qualification are expected to work under supervision servicing and repairing recreational vehicles to meet Australian requirements, such as road worthiness and the Australian Design Rule (ADR). Recreation vehicles include:

- motor homes
- caravans
- camper trailers
- slide-ons
- fifth wheelers.

The work may be in a service and repair facility or in a manufacturer's factory and apply to the recreational vehicle body, fittings and running gear. Work may be undertaking warranty work, for an insurance claim, modifying an existing recreational vehicle or undertaking routine servicing.

People with this qualification may be expected to:

- carry out insurance repair
- carry out other repairs
- carry out work under warranty
- undertake modifications/refits to the recreational vehicle
- undertake routine servicing
- prepare a recreational vehicle for sale/resale.

Workers may also specify and access outside specialist services, for example, for spray painting or licensing requirements.

There are no specific licenses that relate to this qualification. However, some units in this qualification may have licensing or regulatory requirements depending on the work context. Local regulations should be checked for details.

### **MSM21115 Certificate II in Recreational Vehicle Manufacture**

The MSM21115 Certificate II in Recreational Vehicle Manufacture has been developed as an entry-level qualification. People with this qualification would be expected to work under supervision manufacturing recreational vehicles to meet Australian requirements, such as road worthiness and the Australian Design Rule (ADR). Recreation vehicles include:

- motor homes
- caravans
- camper trailers
- slide-ons
- fifth wheelers.

This work will generally be undertaken in a large manufacturing organisation or smaller workshop environment.

Work typically includes manufacturing recreational vehicles, including special/custom orders as well as standard manufacturer models.

People with this qualification may be expected to:

- carry out the various stages in recreational vehicle manufacture
- undertake modifications/refits to a recreational vehicle
- prepare a recreational vehicle for sale.

They may also specify and access outside specialist services, for example, for spray painting or licensing requirements.

There are no specific licenses that relate to this qualification. However, some units in this qualification may have licensing or regulatory requirements depending on the work context. Local regulations should be checked for details.

### **Certificate III AQF descriptor**

#### **Purpose**

The Certificate III qualifies individuals who apply a broad range of knowledge and skills in varied contexts to undertake skilled work and as a pathway for further learning.

#### **Knowledge**

Graduates of a Certificate III will have factual, technical, procedural and theoretical knowledge in an area of work and learning.

#### **Skills**

Graduates of a Certificate III will have:

- cognitive, technical and communication skills to interpret and act on available information
- cognitive and communication skills to apply and communicate known solutions to a variety of predictable problems and to deal with unforeseen contingencies using known solutions
- technical and communication skills to provide technical information to a variety of specialist and non-specialist audiences
- technical skills to undertake routine and some non-routine tasks in a range of skilled operations.

#### **Application**

Graduates of a Certificate III will:

- demonstrate the application of knowledge and skills with discretion and judgement in the selection of equipment, services or contingency measures, and skills to adapt and transfer skills and knowledge within known routines, methods, procedures and time constraints.
- work is in the context of taking responsibility for own outputs in work and learning, including participation in teams and taking limited responsibility for the output of others within established parameters.

#### **Volume of learning**

The volume of learning of a Certificate III is typically 1-2 years which equates to 1200- 2400 hours.



## Certificate III qualifications descriptions

### **MSM30116 Certificate III in Process Manufacturing**

The MSM30116 Certificate III in Process Manufacturing provides the competencies required by advanced production workers who use a range of equipment and provide support functions directly related to producing products. They would undertake more advanced roles than workers with a Certificate II, working in accordance with the operating procedures and applying knowledge to anticipate problems and solve a range of foreseen and unforeseen problems.

This qualification is designed for use across the three process manufacturing sectors:

- chemical, hydrocarbons and oil refining
- plastics, rubber and cabling
- manufactured mineral products.

It includes the same range of electives, but with different packaging rules to provide a qualification for workers unable to meet the technical requirements of PMA, PMB or PMC. This qualification covers:

- production support workers - people working in manufacturing and filling the vital production support roles but who may not have the opportunity to develop competency in sufficient technical units related directly to producing products
- employees who operate across more than one category within process manufacturing or 'specialised processes' and elsewhere when required.

### **MSM30216 Certificate III in Surface Preparation and Coating Application**

The MSM30216 Certificate III in Surface Preparation and Coating Application provides the trade-level competencies required to perform the wide range of surface preparation and protective coating application operations that occur across a range of heavy industry, ships and infrastructure.

The surfaces being prepared are typically metal (usually ferrous) and may be structural or have other mechanical requirements. The protective coatings may be liquid or solid. The applied coating may or may not be the final coat and its purpose is protective, not decorative.

People with this qualification would be expected to work under routine supervision only, preparing surfaces and/or applying protective coatings in accordance with a provided technical specification. They would be expected to recognise situations where the intended approach was not appropriate/not working and take appropriate action to ensure the final result is satisfactory.

People with this qualification may be expected to undertake some combination of:

- abrasively blast clean surfaces to Australian Standard requirements and in accordance with the specification
- prepare surfaces for coating as required by the specification
- apply liquid protective surface coatings
- apply solid polymer surface coatings (this is usually a specialised area).

They may work in a manufacturer's factory or they may work as contractors on the site of the plant/ship/infrastructure.

This work may be undertaken:

- in a factory environment
- in an onsite, outdoors environment
- inside a vessel or other confined space

- outside a vessel or structure
- at heights
- some combination of these.

### **MSM30318 Certificate III in Manufactured Mineral Products**

MSM30318 Certificate III in Manufactured Mineral Products reflects the role of operators who perform a range of operations to directly produce manufactured mineral products for industry, including cement, pre-cast concrete, pre-mixed concrete, quarry and asphalt.

The operator will be able to work independently and to apply theoretical and technical knowledge and well-developed skills to undertake operations and exercise judgement in areas such as start-up and shutdown procedures and quality assurance.

The operator will be able to apply product and process knowledge to anticipate and solve a range of routine and non-routine problems. This includes developing solutions to problems which do not have a known solution or do not have a solution recorded in the procedures.

### **MSM31015 Certificate III in Recreational Vehicle Service and Repair**

The MSM31015 Certificate III in Recreational Vehicle Service and Repair has been developed as a trade-level qualification. People with this qualification would be expected to work under supervision servicing and repairing recreational vehicles to meet Australian requirements, such as road worthiness and the Australian Design Rule (ADR). Recreation vehicles include:

- motor homes
- caravans
- camper trailers
- slide-ons
- fifth wheelers.

The work is done in a service and repair facility or a manufacturer's factory undertaking warranty work. Work may be for an insurance claim, warranty claim, modifying an existing recreational vehicle or undertaking routine servicing.

Workers typically service and repair any recreational vehicle as required. This may apply to the recreational vehicle body, fittings and running gear. Work may be in response to a road (or other) accident, hail damage, vehicle modification or routine servicing.

People with this qualification may be expected to:

- carry out insurance repairs
- carry out other repairs
- carry out work under warranty
- undertake modifications/refits to the recreational vehicle
- undertake routine servicing
- prepare a recreational vehicle for sale/resale.

They may also specify and access outside specialist services, for example, for spray painting or licensing requirements.

There are no specific licenses that relate to this qualification. However, some units in this qualification may have licensing or regulatory requirements depending on the work context. Local regulations should be checked for details.

### **MSM31115 Certificate III in Recreational Vehicle Manufacture**

The MSM31115 Certificate III in Recreational Vehicle Manufacture has been developed as a trade-level qualification. People with this qualification would be expected to work under supervision manufacturing recreational vehicles to meet Australian requirements, such as road worthiness and the Australian Design Rule (ADR). Recreation vehicles include:

- motor homes
- caravans
- camper trailers
- slide-ons
- fifth wheelers.

This work will generally be undertaken in a factory, large manufacturing organisation or in a smaller workshop environment.

Workers typically manufacture recreational vehicles as required. This may include special/custom orders or standard manufacturer models.

People with this qualification may be expected to:

- carry out the various stages in recreational vehicle manufacture
- undertake modifications/refits to a recreational vehicle
- prepare a recreational vehicle for sale.

They may also specify and access outside specialist services, for example, for spray painting or licensing requirements.

There are no specific licenses that relate to this qualification. However, some units in this qualification may have licensing or regulatory requirements depending on the work context. Local regulations should be checked for details.

### **MSM31215 Certificate III in Recreational Vehicle and Accessories Retailing**

The MSM31215 Certificate III in Recreational Vehicle and Accessories Retailing has been developed as a trade-level qualification. This qualification has been developed in response to an industry request. People with this qualification would be expected to work under supervision in the sale of recreational vehicles and accessories, including:

- motor homes
- caravans
- camper trailers
- slide-ons
- fifth wheelers.

This sales work is carried out in a workshop or showroom environment. Sales may be for a new recreational vehicle, a second-hand/refurbished recreational vehicle or spare parts and accessories. Workers will analyse the customer's requirements and then carry them out. In some cases selling of the recreational vehicle may include identifying possible modifications which could be made to the recreational vehicle.

Recreational vehicle sales require specialised knowledge not only of the available range of recreational vehicle models and accessories but of the legal requirements associated with weight, towing and vehicle capacity.

People with this qualification may be expected to:

- sell a new or second-hand recreational vehicle

- suggest modifications/refits to a recreational vehicle
- prepare a recreational vehicle for sale/resale
- sell spare parts and accessories.

There are no specific licenses that relate to this qualification. However, some units in this qualification may have licensing or regulatory requirements depending on the work context. Local regulations should be checked for details.

## **Certificate IV AQF descriptor**

### **Purpose**

The Certificate IV qualifies individuals who apply a broad range of specialised knowledge and skills in varied contexts to undertake skilled work and as a pathway for further learning.

### **Knowledge**

Graduates of a Certificate IV will have broad factual, technical and theoretical knowledge in a specialised field of work and learning.

### **Skills**

Graduates of a Certificate IV will have:

- cognitive skills to identify, analyse, compare and act on information from a range of sources
- cognitive, technical and communication skills to apply and communicate technical solutions of a non-routine or contingency nature to a defined range of predictable and unpredictable problems
- specialist technical skills to complete routine and non-routine tasks and functions
- communication skills to guide activities and provide technical advice in the area of work and learning.

### **Application**

Graduates of a Certificate IV will demonstrate the application of knowledge and skills to specialised tasks or functions in known or changing contexts with responsibility for own functions and outputs and may have limited responsibility for organisation and quantity and quality of the output of others within limited parameters.

### **Volume of learning**

The volume of learning of a Certificate IV is typically 0.5-2 years. This equates to 600-2400 hours.

## **Certificate IV qualifications descriptions**

### **MSM40116 Certificate IV in Process Manufacturing**

The MSM40116 Certificate IV in Process Manufacturing provides the competencies required by advanced production workers who use a range of equipment and are involved in solving complex problems that require theoretical knowledge, combined with an understanding of operating procedures directly related to producing products.

This qualification is typically used to develop employees performing a technical role that includes the ability to work independently and conduct technical problem solving according to the needs of the work required to produce products.

This qualification is designed to develop employees who operate across more than one category within process manufacturing or other product conversion processes in manufacturing. Typical applications would be in chemical, hydrocarbons, refining, minerals processing, plastics, rubber, cabling, manufactured mineral products, and other areas as appropriate.

Non-technical team leaders, coordinators and supervisors may be better served by a qualification in competitive manufacturing. Qualification pathways from this qualification include MSM50316 Diploma of Production Management and MSS50312 Diploma of Competitive Systems and Practices.

#### **MSM41015 Certificate IV in Recreational Vehicles**

The MSM41015 Certificate IV in Recreational Vehicles has been developed as a post-trade level qualification. This qualification has been developed in response to an industry request. People with this qualification would be expected to lead work teams and provide supervision of people undertaking the manufacture, service or repair of recreational vehicles to meet Australian requirements, such as road worthiness and the Australian Design Rule (ADR). Recreation vehicles include:

- motor homes
- caravans
- camper trailers
- slide-ons
- fifth wheelers.

They will provide technical leadership as well as undertake some tasks themselves.

The work is done in a service and repair facility or a manufacturer's factory. Work may include building a new recreational vehicle, repairs for an insurance claim or other repairs, modifying an existing recreational vehicle or undertaking routine servicing.

Workers typically manufacture, service and repair recreational vehicles as required. This may apply to the recreational vehicle body, fittings and running gear. Repairs may be in response to a road (or other) accident, hail damage, vehicle modification or routine servicing.

People with this qualification may be expected to lead and also undertake one or more of:

- manufacture of a recreational vehicle
- insurance repairs
- other repairs
- work under warranty
- modifications/refits to the recreational vehicle
- routine servicing
- preparation of a recreational vehicle for sale/resale.

They may also specify and access outside specialist services, for example, for spray painting or licensing requirements.

There are no specific licenses that relate to this qualification. However, some units in this qualification may have licensing or regulatory requirements depending on the work context. Local regulations should be checked for details.

#### **MSM41115 Certificate IV in Recreational Vehicle and Accessories Retailing**

The MSM41115 Certificate IV in Recreational Vehicle and Accessories Retailing has been developed as a post-trade level qualification. This qualification has been developed in response to an industry request. People with this qualification would be expected to lead sales teams and provide supervision of people in the sale of recreational vehicles and accessories, including:

- motor homes
- caravans
- camper trailers

- slide-ons
- fifth wheelers.

The sales work is done in a workshop or showroom environment. Sales may be for a new recreational vehicle, a second-hand/refurbished recreational vehicle or spare parts and accessories. In some cases, selling of the recreational vehicle may also include possible modifications to the recreational vehicle.

Recreational vehicle sales require specialised knowledge not only of the available range of recreational vehicle models and accessories but of the legal requirements associated with weight, towing and vehicle capacity.

People with this qualification may be expected to:

- sell a new or second-hand recreational vehicle
- suggest modifications/refits to a recreational vehicle
- prepare a recreational vehicle for sale/resale
- sell spare parts and accessories
- manage a sales area/showroom.

They will provide technical leadership as well as undertake some tasks themselves.

There are no specific licenses that relate to this qualification. However, some units in this qualification may have licensing or regulatory requirements depending on the work context. Local regulations should be checked for details.

## **Diploma AQF qualification descriptor**

### **Purpose**

The Diploma qualifies individuals who apply integrated technical and theoretical concepts in a broad range of contexts to undertake advanced skilled or paraprofessional work and as a pathway for further learning.

### **Knowledge**

Graduates of a Diploma will have technical and theoretical knowledge and concepts, with depth in some areas within a field of work and learning.

### **Skills**

Graduates of a Diploma will have:

- cognitive and communication skills to identify, analyse, synthesise and act on information from a range of sources
- cognitive, technical and communication skills to analyse, plan, design and evaluate approaches to unpredictable problems and/or management requirements
- specialist technical and creative skills to express ideas and perspectives
- communication skills to transfer knowledge and specialised skills to others and demonstrate understanding of knowledge.

### **Application**

Graduates of a Diploma will demonstrate the application of knowledge with depth in some areas of specialisation, in known or changing contexts and skills to transfer and apply theoretical concepts and/or technical and/or creative skills in a range of situations with personal responsibility and autonomy in performing complex technical operations and for quantity and quality. Work involves initiative and judgement to organise the work of self and others and plan, coordinate and evaluate the work of teams within broad but generally well-defined parameters.

### **Volume of learning**

The volume of learning for a Diploma is typically 1-2 years which equates to 1200-2400 hours.

## **Diploma qualification descriptions**

### **MSM50316 Diploma of Production Management**

The MSM50316 Diploma of Production Management provides the skills and knowledge required to plan, direct and coordinate production activities in a manufacturing environment. The qualification has been developed with the process manufacturing sector as a focus. It may also be applied in other organisations in the value chain.

The qualification has been developed on an assumption that competency will be developed through a combination of on and off-the-job learning strategies.

The MSM50315 Diploma of Production Management specifies the competencies required for employment in job roles related to assisting organisations to improve production. Employment outcomes related to this qualification may include roles such as a production or operations manager.

This qualification provides skills that can be applied to the design and control of production systems within an organisation, including:

- planning and scheduling
- tracking and analysing
- directing and operating.

This qualification provides the skills needed to assist organisations to improve production where competitive systems and practices (lean) processes are not fully employed. It therefore complements but does not duplicate qualifications supplying skills related to competitive systems and practices. Where these skills are required the MSS50312 Diploma of Competitive Systems and Practices should be considered.

This qualification can be accessed by direct entry. However, entrants for the qualification should already possess operational or technical skills related to the organisation seeking production improvements, either through prior relevant experience or qualifications. For this reason, the qualification is not suitable as an entry-level qualification for school leavers.

### **MSM51015 Diploma of Recreational Vehicles**

The MSM51015 Diploma of Recreational Vehicles has been developed to reflect the role of senior technicians and managers in a recreational vehicle manufacturing, repair service or retailing organisation. This qualification has been developed in response to an industry request. People with this qualification would be expected to undertake technical projects and/or manage departments or entire organisations undertaking the manufacture, service repair or retailing of recreational vehicles, accessories or spares including:

- motor homes
- caravans
- camper trailers
- slide-ons
- fifth wheelers.

Workers typically manage the manufacture, service and repair or retailing recreational vehicles as required in a workshop, factory or showroom facility. The organisation may build new recreational vehicles, repair recreational vehicles for insurance claims, modify existing recreational vehicles or undertake routine servicing or retail new/second-hand recreational vehicles, their accessories and spares.

They may also undertake initial design or design modifications of a recreational vehicle.

This may apply to the recreational vehicles body, fittings and running gear. Repairs may be in response to a road (or other) accident, hail damage, vehicle modification or routine servicing.

People with this qualification may be expected to manage the work. They may also specify and access outside specialist services, for example, for spray painting or licensing requirements. There are no specific licenses that relate to this qualification. However, some units in this qualification may have licensing or regulatory requirements depending on the work context. Local regulations should be checked for details.

## Choosing electives

The elective units of competency listed within recreational vehicle qualifications provide for skill development in all the industry sectors identified by industry representatives during consultations. All qualifications can be customised since particular combinations of elective units can be selected to suit individual student needs and the industry sector.

The manufacturing technology units coded MSMPCH were specifically developed for the Certificate II in Manufacturing Technology. They are designed for use only in a Pathways qualification or Skill Set. They should not be used in other qualifications as replacements for units that have direct job outcomes.

### Importing elective units

Units of competency may be imported from another endorsed Training Package to customise a qualification. These imported units may be used to replace the maximum number of imported units that are identified in the packaging rules. The use of imported units of competency is allowed if:

- they are from an endorsed Training Package or other accredited course and are packaged at the same AQF certificate level (the original unit title and code number must be retained)
- they are appropriate to the needs of the organisation
- any prerequisites specified in the original unit and any specific assessment requirements in the host Training Package are also observed.

### Exporting units to other Training Packages

Manufacturing Skills Australia encourages other industries to access the units of competency in this Training Package which might be appropriate to their needs. These competencies may be used provided:

- the original unit code and title are retained
- they are only contextualised to the extent permitted below
- any specified prerequisites and any specific assessment requirements in the host Training Package are observed

### Contextualising units of competency

Units of competency may, and in some cases should, be contextualised to the sub-sector and type of work environment involved. Contextualisation is allowed and encouraged provided the contextualised unit is of similar level and rigour to the original unit of competency. Examples include contextualisation which:

- replaces general directions with organisation specific needs



- replaces generic equipment/process names with organisation specific names
- replaces general processes/specifications with organisation specific needs.

Contextualisation of the elements or performance criteria is not permitted. As a minimum, the contextualised unit should:

- be of similar level and rigour
- be of a similar breadth, complexity and size
- be relevant to the industry sector and the organisation
- not reduce the health, safety or environmental requirements
- retain the original unit code and title.

## Health and safety

The latest version of all legislation, regulations, industry codes of practice and Australian/international standards, or the version specified by the local regulatory authority, must be used.

Applicable legislation, regulations, standards and codes of practice include the following:

- work health and safety (WHS) legislation, codes of practice and guidance material
- Australian Design Rules (ADR)
- environmental regulations and guidelines
- other relevant government legislation, regulations and codes
- Australian and other standards
- other relevant codes and standards
- licence and certification requirements.

The regulatory framework will be reflected in workplace policies and procedures and is not required to be independently assessed.

All operations must comply with WHS and environmental management requirements, which may be imposed through state/territory or federal legislation - these requirements must not be compromised at any time.

Individual units of competency give details on the relevant WHS requirements.

### **Risk management and industry requirements for refresher training and/or reassessment**

Certain units of competency in this Training Package are associated with elevated levels of risk, which is either inherent in the performance of the competency, or the competency is critical in managing the risk of an activity. Further to this, some of these units are not routinely practiced and so, to maintain competency regular retraining is required, followed by reassessment as evidence that competency has been achieved/retained.

The units below either require reassessment to comply with the relevant Australian Standard, or reassessment is required by industry. The retraining/reassessment period specified below conforms with that required by the noted Standard, or meets industry specified good practice requirements.

#### **MSMPER205 Enter confined space**

AS2865-2009 Confined spaces requires 'persons ... be reassessed at appropriate intervals'. Industry regards reassessment on a two year cycle as good practice.

### **MSMWHS210 Undertake first response to non-fire incidents**

Industry regards retraining and reassessment on a two year cycle as good practice.

### **MSMWHS212 Undertake first response to fire incidents**

Industry regards retraining and reassessment on a two year cycle as good practice.

### **MSMWHS216 Operate breathing apparatus**

AS/NZS 1715:2009 Selection, use and maintenance of respiratory protective equipment stipulates the frequency of retraining and reassessment 'as a minimum shall be considered at least annually'

### **MSMWHS217 Gas test atmospheres**

Industry regards reassessment on a two to three year cycle as good practice.

## **Access and equity and reasonable adjustments**

A student's access to the training and assessment process should not be adversely affected by restrictions placed on the location or context of assessment beyond the requirements specified in this Training Package. Training and assessment must be bias-free.

Under the Disability Standards for Education 2005, RTOs must make reasonable adjustments for people with disability to the maximum extent that those adjustments do not cause that provider unjustifiable hardship. While 'reasonable adjustment' and 'unjustifiable hardship' are different concepts and involve different considerations, they both seek to strike a balance between the interests of education providers and the interests of students with and without disability. The Disability Standards and guidelines for their implementation can be downloaded at <http://www.comlaw.gov.au/Details/F2005L00767>.

An adjustment is any measure or action that a student requires because of their disability, and which has the effect of assisting them to access and participate in education and training on the same basis as those without a disability. An adjustment is reasonable if it achieves this purpose while taking into account factors such as the nature of the student's disability, their views, the potential effect of the adjustment on the student and others who might be affected, and the costs and benefits of making the adjustment.

When assessing whether an adjustment is reasonable, a training provider is required to maintain the academic requirements of a unit of competency that are inherent or essential to its outcome. There may be more than one adjustment that is reasonable in a given set of circumstances; education providers are required to make adjustments that are reasonable and that do not cause them unjustifiable hardship.

Adjustments must not diminish the rigour of the unit of competency being assessed.

## **Foundation skills**

Foundation Skills are those core or essential skills we need to engage successfully in work and life. The term 'Foundation Skills' is currently used to include the core skills defined in the Australian Core Skills Framework (ACSF) as well as the Employment Skills identified as critical for effective performance in the workplace. The core skills of the ACSF include reading, writing, oral communication, numeracy and learning.

Foundation Skills are deemed essential to successful learning and continuing employment. In the MSM units of competency advice is provided that relevant foundation skills are explicit in the performance criteria. Below is a mapping of each MSM unit of competency against the Australian Core Skills Framework.

It is important to note that the ACSF mapping has not been validated and is available as a guide only. The mapping provides an indicative assessment that may assist RTOs to undertake exercises, such as a pre-assessment checks to make a decision about a learner's suitability for enrolment, and plan for what needs to be achieved by the end of the training program. An RTO must undertake its own assessment, and validate outcomes, to ensure consistent judgement of ACSF levels that should be achieved by the learner at the end of a vocational training program.

## Mapping of MSM units to the Australian Core Skills Framework

Unit code	Unit title	Learning	Reading	Writing	Oral Communication	Numeracy
MSMENV172	Identify and minimise environmental hazards	-	1	1	1	1
MSMENV272	Participate in environmentally sustainable work practices	2	2	2	2	2
MSMENV472	Implement and monitor environmentally sustainable work practices	4	4	3	3	3
MSMENV672	Develop workplace policy and procedures for environmental sustainability	5	5	5	5	4
MSMOPS100	Use equipment	1	1	-	1	-
MSMOPS101	Make measurements	1	1	1	2	2
MSMOPS102	Perform tasks to support production	1	1	1	2	2
MSMOPS200	Operate equipment	2	1	2	2	2
MSMOPS200	Operate equipment	2	2	2	2	3
MSMOPS201	Cut polymer materials	1	1	2	2	2
MSMOPS202	Fabricate polymer products	2	2	2	2	2
MSMOPS212	Use organisation computers or data systems	2	2	2	2	2
MSMOPS244	Layout and cut materials	1	3	2	2	2
MSMOPS301	Treat corrosion	3	3	3	3	3
MSMOPS363	Organise on site work	3	3	3	3	2
MSMOPS400	Optimise process/plant area	3	3	3	4	3
MSMOPS401	Trial new process or product	3	4	4	4	3
MSMOPS601	Design equipment and system modifications	4	4	4	5	4
MSMPER200	Work in accordance with an issued permit	3	2	2	2	2
MSMPER201	Monitor and control work permits	2	2	2	2	2
MSMPER202	Observe permit work	2	2	2	2	2

MSMPER205	Enter confined space	2	3	2	3	2
MSMPER300	Issue work permits	3	3	3	3	3
MSMPER400	Coordinate permit process	4	4	3	4	3
MSMPMC200	Organise self	2	2	2	2	2
MSMPMC300	Produce structural precast concrete	3	3	2	2	2
MSMPMC301	Store materials for production	3	2	2	2	2
MSMPMC302	Operate equipment to blend/mix materials	3	2	2	2	2
MSMPMC303	Operate grinding equipment	3	2	2	2	2
MSMPMC304	Prepare for production	3	2	2	2	2
MSMPMC305	Heat accelerate the curing of precast concrete	3	2	2	2	2
MSMPMC306	Operate crushing equipment	3	2	2	2	2
MSMPMC307	Operate a calcining kiln	3	2	2	2	2
MSMPMC308	Operate slip casting equipment	3	2	2	2	2
MSMPMC309	Finish products after firing	3	2	2	2	2
MSMPMC310	Hand mould products	3	2	2	2	2
MSMPMC311	Operate a firing kiln	3	2	2	2	2
MSMPMC312	Operate glass finishing equipment	3	2	2	2	2
MSMPMC313	Schedule, cut and bend reinforcement	3	2	2	2	2-3
MSMPMC314	Finish green concrete products	3	2	2	2	2
MSMPMC315	Cast moulded concrete products	3	2	2	2	2
MSMPMC316	Finish cured concrete products	3	2	2	2	2
MSMPMC317	Conduct benching operations	3	2	2	2	2-3
MSMPMC318	Assemble, fabricate and place reinforcement	3	2	2	2	2
MSMPMC319	Finish casting operation	3	2	2	2	2
MSMPMC320	Demould concrete products	3	2	2	2	2
MSMPMC321	Batch mix concrete	3	2	2	2	2
MSMPMC322	Deliver concrete to site	3	2	2	2	2

MSMPMC323	Prepare asphalt	3	2	2	2	2
MSMPMC324	Move materials	3	2	2	2	2
MSMPMC325	Operate bulk materials handling equipment	3	2	2	2	2
MSMPMC326	Deliver customer service	3	2	2	3	2
MSMPMC327	Allocate and complete team tasks	3	2	2	3	2
MSMPMC328	Prepare for and apply shotcrete for installation	3	2	2	2	2
MSMPMC329	Prepare moulds and dies	3	2	2	2	2
MSMPMC330	Produce architectural precast concrete	3	3	2	2	2
MSMPMC400	Carry out stock control	4	2	2	2	2
MSMPMC401	Set up and tune a process	4	3	2	2	3
MSMPMC402	Process raw meal into product	4	3	2	2	3
MSMPMC403	Set up and optimise glass forming process	4	3	2	2	3
MSMRV310	Fit recreational vehicle floor	2	2	2	2	1
MSMRV311	Fit furniture in a recreational vehicle	2	2	2	2	1
MSMRV312	Fit water systems in a recreational vehicle	2	2	2	2	1
MSMRV313	Fit 12 V cable systems in a recreational vehicle	2	2	2	2	1
MSMRV314	Construct and fit roof to a recreational vehicle	2	2	2	2	1
MSMRV315	Construct and fit slide out in a recreational vehicle	2	2	2	2	1
MSMRV316	Fit appliances in a recreational vehicle	2	2	2	2	1
MSMRV317	Install solar equipment on a recreational vehicle	2	2	2	2	1
MSMRV318	Fit cladding to a recreational vehicle	2	2	2	2	1
MSMRV319	Fit front and rear moulds to a recreational vehicle	2	2	2	2	1
MSMRV320	Fit windows and doors to a recreational vehicle	2	2	2	2	1
MSMRV321	Fit required external items to a recreational vehicle	2	2	2	2	1
MSMRV322	Fit required external electrical components to a recreational vehicle	2	2	2	2	1
MSMRV323	Fit required internal items	2	2	2	2	1

	to a recreational vehicle					
MSMRV324	Conduct final quality inspection for a recreational vehicle	2	2	2	2	1
MSMRV325	Fabricate a chassis and suspension for a recreational vehicle	2	2	2	2	1
MSMRV350	Remove and replace a recreational vehicle roof	2	2	2	2	1
MSMRV351	Remove and replace a recreational vehicle floor	2	2	2	2	1
MSMRV352	Remove and replace a recreational vehicle sidewall cladding	2	2	2	2	1
MSMRV353	Remove and replace a recreational vehicle shower cubicle	2	2	2	2	1
MSMRV354	Remove and replace a recreational vehicle shower walls	2	2	2	2	1
MSMRV355	Remove and replace a camper/pop-top roof	2	2	2	2	1
MSMRV356	Remove and replace gas struts and roof lifting equipment on a recreational vehicle	2	2	2	2	1
MSMRV357	Remove and replace external components of a recreational vehicle	2	2	2	2	1
MSMRV358	Modify the body of a recreational vehicle	2	2	2	2	1
MSMRV359	Install additional appliances in a recreational vehicle	2	2	2	2	1
MSMRV360	Service camper wind up systems	2	2	2	2	1
MSMRV361	Repair dry rot in a recreational vehicle	2	2	2	2	1
MSMRV362	Install and repair battery systems in a recreational vehicle	2	2	2	2	1
MSMRV363	Complete pre-delivery check of a recreational vehicle	2	2	2	2	1
MSMRV364	Hand over a recreational vehicle to a customer	2	2	2	2	1
MSMRV365	Remove and refit body moulding	2	2	2	2	1
MSMRV366	Fit transfers and decals to a recreational vehicle	2	2	2	2	1
MSMRVG201	Tow a recreational vehicle safely	2	2	2	2	2
MSMRVS202	Repair/service LPG systems in a recreational vehicle	2	2	2	2	2
MSMRVS401	Assess and quote to service a recreational	2	2	2	2	1

	vehicle					
MSMRVT201	Apply technical knowledge of recreational vehicle manufacturing to work activities	2	2	2	2	1
MSMSUP100	Apply workplace context to own job	1	2	2	2	1
MSMSUP101	Clean workplace or equipment	1	1	1	1	1
MSMSUP102	Communicate in the workplace	1	2	2	2	1
MSMSUP106	Work in a team	1	1	2	2	1
MSMSUP200	Achieve work outcomes	2	2	2	2	1
MSMSUP204	Pack products or materials	?	2	1-2	-	1
MSMSUP205	Transfer loads	2	1	2	2	2
MSMSUP210	Process and record information	2	2	2	2	1
MSMSUP230	Monitor process operations	2	2	2	2	1
MSMSUP240	Undertake minor maintenance	2	2	2	2	1
MSMSUP273	Handle goods	2	2	1	1	1
MSMSUP280	Manage conflict at work	2	2	2	2	1
MSMSUP291	Participate in continuous improvement	2	2	2	2	1
MSMSUP292	Sample and test materials and product	-	2	2	-	3
MSMSUP300	Identify and apply process improvements	3	3	3	3	3
MSMSUP301	Apply HACCP to the workplace	2	3	3	3	3
MSMSUP303	Identify equipment faults	2	3	3	3	3
MSMSUP309	Maintain and organise workplace records	2	3	2	2	2
MSMSUP310	Contribute to the development of workplace documentation	3	3	4	3	3
MSMSUP330	Develop and adjust a production schedule	3	2-3	2	2-3	3
MSMSUP382	Provide coaching/mentoring in the workplace	3	2	2	4	2
MSMSUP383	Facilitate a team	3	3	3	3	2
MSMSUP390	Use structured problem-solving tools	2	2	2	2	2
MSMSUP400	Develop and monitor quality systems	3	4	4	4	4
MSMSUP404	Co-ordinate maintenance	3-4	3	3	2	3-4
MSMSUP405	Identify problems in fluid power system	3	3	3	3	3
MSMSUP406	Identify faults in electronic control	3-4	3	3-4	3	3-4
MSMWHS100	Follow WHS procedures	1	1	-	1	-
MSMWHS110	Follow emergency response procedures	2	2	2	2	1

MSMWHS200	Work safely	2	2	2	2	1
MSMWHS201	Conduct hazard analysis	2	2	2	1	1
MSMWHS205	Control minor incidents	2	2	2	2	1
MSMWHS210	Undertake first response to non-fire incidents	1	1	-	2	-
MSMWHS216	Operate breathing apparatus	1	1	1	2	1
MSMWHS217	Gas test atmospheres	-	2	2	2	3
MSMWHS218	Control the risks of falls	2	2	2	1	1
MSMWHS300	Facilitate the implementation of WHS for a work group	2	3	2	4	2
MSMWHS400	Contribute to WHS management system	4	4	4	4	3
MSMWHS401	Assess risk	4	4	4	4-5	4
MSMWHS503	Maintain WHS management system	4	5	4	4	4
MSMWHS510	Manage risk	4	4	4	4	4
MSMWHS601	Develop WHS management system	5	5	5	4	4
MSMWJ201	Use high pressure water jetting equipment	1	2	1	2	2
MSMWJ301	Operate a high pressure water jetting system	2	3	2	3	3
MSMWJ302	Operate a drain cleaning system	2	3	2	3	3
MSMWJ303	Operate a vacuum loading system	2	3	2	3	3

## Employment Skills

There are eight Employment Skills:

- communication
- teamwork
- problem solving
- initiative and enterprise
- planning and organising
- self-management
- learning
- technology.

An employment skills summary for each qualification is provided below. Employment skills summaries provide examples of how each skill is applicable to the occupational outcomes covered by the qualification. The summaries are designed to assist trainers and assessors to identify and include employability skills in training and assessment strategies. Employment skills summaries contain information that may also assist in building students' understanding of industry and workplace expectations.

Employment Skills summaries contain general information about industry context, which is further identified as measurable outcomes of performance in the units of competency in each qualification.



Employment skills summaries are not exhaustive lists of qualification requirements or checklists of performance (which are separate assessment tools that should be designed by trainers and assessors after analysis at the unit level).

### MSM10116 Certificate I in Process Manufacturing

Communication	<ul style="list-style-type: none"> <li>• Complete all reporting as required</li> <li>• Report anything unusual</li> <li>• Receive and relay oral and written messages</li> <li>• Interpret oral or written messages</li> <li>• Respond to information</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Work as part of a work team</li> <li>• Understanding the role of individual in organisational structure</li> <li>• Understanding individual role in achieving section/team, plant and company objectives</li> <li>• Identify individual tasks that are part of the team requirement</li> </ul>
Problem solving	<ul style="list-style-type: none"> <li>• Recognise common problems</li> <li>• Identify problems and take required action</li> <li>• Respond to routine problems</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Take appropriate corrective action</li> <li>• Select appropriate equipment</li> <li>• Identify units to be used</li> <li>• Distinguish between urgent and non-urgent tasks</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Organise relevant equipment and tools</li> <li>• Organise requests and tasks</li> <li>• Plan own work</li> <li>• Plan and organise activities</li> <li>• Organise daily work plan</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Find out what is required for the job</li> <li>• Recognise a situation requiring action</li> <li>• Complete own work activities</li> <li>• Identify task requirements and work role</li> <li>• Plan own work</li> <li>• Meet time lines</li> <li>• Seek assistance from other team members where appropriate</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Recognise anything unusual</li> <li>• Self-check numerical information</li> <li>• Clarify cleaning duties</li> <li>• Ask questions of appropriate person</li> <li>• Seek advice from relevant personnel</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Use equipment</li> <li>• Turn equipment on and off as required by procedures</li> <li>• Monitor equipment</li> <li>• Use computer system</li> </ul>

## MSM10216 Certificate I in Manufacturing (Pathways)

Communication	<ul style="list-style-type: none"> <li>• Complete all reporting as required</li> <li>• Report anything unusual</li> <li>• Alert the appropriate individuals</li> <li>• Record results</li> <li>• Complete logs and reports</li> <li>• Record the result</li> <li>• Receive and relay oral and written messages</li> <li>• Interpret oral or written messages</li> <li>• Respond to information</li> <li>• Complete workplace forms</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working as part of a work team</li> <li>• Role of individual in organisational structure</li> <li>• Individual role in achieving section/team, plant and company objectives</li> <li>• Work in a team</li> <li>• Identify individual tasks that are part of the team requirement</li> </ul>
Problem solving	<ul style="list-style-type: none"> <li>• Recognise common problems</li> <li>• Identify problems and take required action</li> <li>• Respond to routine problems</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Take appropriate corrective action</li> <li>• Select appropriate equipment</li> <li>• Identify units to be used</li> <li>• Distinguish between urgent and non-urgent tasks</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Organise relevant equipment and tools</li> <li>• Organise requests and tasks</li> <li>• Planning workplace procedures, scheduling and performance</li> <li>• Plan own work</li> <li>• Plan and organise activities</li> <li>• Organise daily work plan</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Find out what is required for the job</li> <li>• Recognise a situation requiring action</li> <li>• Implement within appropriate time constraints</li> <li>• Complete own work activities</li> <li>• Identify task requirements and work role</li> <li>• Plan own work</li> <li>• Meet time lines</li> <li>• Seek assistance from other team members where appropriate</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Recognise anything unusual</li> <li>• Self-check numerical information</li> <li>• Clarify cleaning duties</li> <li>• Ask questions of appropriate person</li> <li>• Seek advice from relevant personnel</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Use equipment</li> <li>• Turn equipment on and off as required by procedures</li> <li>• Monitor equipment</li> <li>• Make measurements</li> <li>• Use computer system</li> <li>• Use measuring devices</li> </ul>

## MSM20116 Certificate II in Process Manufacturing

Communication	<ul style="list-style-type: none"> <li>• Complete logs, reports and plant documentation</li> <li>• Access and interpret production plans and information</li> <li>• Provide appropriate workplace information</li> <li>• Give and follow routine instructions</li> <li>• Provide written and oral reports</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Work as part of a team</li> <li>• Identify and describe own role and role of others</li> <li>• Identify own role and responsibility within a team</li> </ul>
Problem solving	<ul style="list-style-type: none"> <li>• Recognise known faults that occur during the operation</li> <li>• Identify and take action on causes of routine faults</li> <li>• Identify non-routine process and quality problems and take appropriate action</li> <li>• Respond to routine problems</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Suggest improvements</li> <li>• Make adjustments to improve equipment performance</li> <li>• Determine problems needing action</li> <li>• Report problems outside area of responsibility</li> <li>• Raise questions regarding requirements and expectations</li> <li>• Distinguish between causes of faults</li> <li>• Identify product out of specification</li> <li>• Safely shutdown equipment in abnormal circumstances</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Plan own work</li> <li>• Achieve production targets</li> <li>• Identify production targets</li> <li>• Recognise hazards and follow appropriate hazard control methods</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Identify work requirements</li> <li>• Plan own work requirements from production requests</li> <li>• Operate within appropriate time constraints and work standards</li> <li>• Select and use appropriate equipment, materials, processes and procedures</li> <li>• Identify task outcomes and work role</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Ask questions to gain information</li> <li>• Seek clarification</li> <li>• Participate in improvement procedures</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Check process is operating within required limits</li> <li>• Monitor equipment operation</li> <li>• Use appropriate instruments</li> <li>• Monitor and adjust machine functions</li> <li>• Use forklift controls, instruments and indicators</li> <li>• Carry out pre-operational checks on equipment</li> </ul>

## MSM20216 Certificate II in Manufacturing Technology

Communication	<ul style="list-style-type: none"> <li>• Access and interpret standardised documentation</li> <li>• Complete all reporting as required</li> <li>• Ask questions to increase understanding about workplace procedures</li> <li>• Read and interpret instructions</li> <li>• Respond to information</li> <li>• Access and use communication tools and equipment</li> <li>• Apply numeracy skills to work procedures</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Work effectively with others</li> <li>• Share information with peers</li> <li>• Understand role of individual within team process</li> <li>• Seek assistance with work operations as required</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Recognise common problems and report inconsistencies</li> <li>• Monitor the job and make improvements</li> <li>• Respond to routine problems</li> <li>• Recommend improvements</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Take correct action and follow procedures</li> <li>• Recommend changes and improvements</li> <li>• Take action to make improvements</li> <li>• Adopt changes in accordance with procedures</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Plan own work</li> <li>• Organise processes, tools and materials</li> <li>• Monitor own work outcomes</li> <li>• Organise and plan activities</li> <li>• Collect and organise information for work activity</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Conduct all activities according to safety standards</li> <li>• Maintain housekeeping standards</li> <li>• Achieve planned outcomes within time constraints</li> <li>• Monitor own work performance</li> <li>• Assess own work</li> <li>• Seek assistance where appropriate</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Ask questions to aid learning</li> <li>• Identify own skill requirements</li> <li>• Ask questions to ensure understanding of own work requirements</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Use equipment and/or or information technology</li> <li>• Identify equipment appropriate for job</li> <li>• Use simple measuring devices</li> <li>• Collect and apply data and information from technology</li> </ul>

## MSM21015 Certificate II in Recreational Vehicle Service and Repair

Communication	<ul style="list-style-type: none"> <li>• Accessing and interpreting standardised documentation</li> <li>• Completing all reporting as required</li> <li>• Asking questions to increase understanding about workplace procedures</li> <li>• Reading and interpreting instructions</li> <li>• Responding to information</li> <li>• Accessing and using communication tools and equipment</li> <li>• Applying numeracy skills to work procedures</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working effectively with others</li> <li>• Sharing information with peers</li> <li>• Understanding role of individual within team process</li> <li>• Seeking assistance with work operations as required</li> </ul>
Problem solving	<ul style="list-style-type: none"> <li>• Recognising common problems and reporting inconsistencies</li> <li>• Monitoring the job and making improvements</li> <li>• Responding to routine problems</li> <li>• Recommending improvements</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Taking correct action and following procedures</li> <li>• Recommending changes and improvements</li> <li>• Taking action to make improvements</li> <li>• Adopting changes in accordance with procedures</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Planning own work</li> <li>• Organising processes, tools and materials</li> <li>• Monitoring own work outcomes</li> <li>• Organising and planning activities</li> <li>• Collecting and organising information for work activity</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Conducting all activities according to safety standards</li> <li>• Maintaining housekeeping standards</li> <li>• Achieving planned outcomes within time constraints</li> <li>• Monitoring own work performance</li> <li>• Assessing own work</li> <li>• Seeking assistance where appropriate</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Asking questions to aid learning</li> <li>• Identifying own skill requirements</li> <li>• Asking questions to ensure understanding of own work requirements</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using equipment and/or information technology</li> <li>• Identifying equipment appropriate for job</li> <li>• Using simple measuring devices</li> <li>• Collecting and applying data and information from technology</li> </ul>

## MSM21115 Certificate II in Recreational Vehicle Manufacturing

Communication	<ul style="list-style-type: none"> <li>• Accessing and interpreting standardised documentation</li> <li>• Completing all reporting as required</li> <li>• Asking questions to increase understanding about workplace procedures</li> <li>• Reading and interpreting instructions</li> <li>• Responding to information</li> <li>• Accessing and using communication tools and equipment</li> <li>• Applying numeracy skills to work procedures</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working effectively with others</li> <li>• Sharing information with peers</li> <li>• Understanding role of individual within team process</li> <li>• Seeking assistance with work operations as required</li> </ul>
Problem solving	<ul style="list-style-type: none"> <li>• Recognising common problems and report inconsistencies</li> <li>• Monitoring the job and making improvements</li> <li>• Responding to routine problems</li> <li>• Recommending improvements</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Taking correct action and following procedures</li> <li>• Recommending changes and improvements</li> <li>• Taking action to make improvements</li> <li>• Adopting changes in accordance with procedures</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Planning own work</li> <li>• Organising processes, tools and materials</li> <li>• Monitoring own work outcomes</li> <li>• Organising and planning activities</li> <li>• Collecting and organising information for work activity</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Conducting all activities according to safety standards</li> <li>• Maintaining housekeeping standards</li> <li>• Achieving planned outcomes within time constraints</li> <li>• Monitoring own work performance</li> <li>• Assessing own work</li> <li>• Seeking assistance where appropriate</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Asking questions to aid learning</li> <li>• Identifying own skill requirements</li> <li>• Asking questions to ensure understanding of own work requirements</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using equipment and/or or information technology</li> <li>• Identifying equipment appropriate for job</li> <li>• Using simple measuring devices</li> <li>• Collecting and applying data and information from technology</li> </ul>

## MSM30116 Certificate III in Process Manufacturing

Communication	<ul style="list-style-type: none"> <li>• Complete logs and reports</li> <li>• Use technical information and manufacturer's information</li> <li>• Collect, analyse and organise information</li> <li>• Communicate ideas and information</li> <li>• Effective use of workplace documentation</li> <li>• Maintain workplace records</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Identify and describe own role and role of others</li> <li>• Work within a team</li> <li>• Resolve conflicts between team members</li> <li>• Use teamwork strategies</li> </ul>
Problem solving	<ul style="list-style-type: none"> <li>• Recognise a problem or a potential problem</li> <li>• Determine problems needing priority action</li> <li>• Refer problems outside area of responsibility to appropriate person, with possible causes</li> <li>• Seek information and assistance as required to solve problems</li> <li>• Solve problems within area of responsibility</li> <li>• Follow through items initiated until final resolution has occurred</li> <li>• Identify and isolate faults in equipment</li> <li>• Use a range of formal problem solving techniques</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Identify the most appropriate equipment</li> <li>• Make adjustments to improve equipment performance</li> <li>• Anticipate the impact of the process on the product</li> <li>• Determine problems needing action</li> <li>• Recommend required action</li> <li>• Report problems outside area of responsibility</li> <li>• Distinguish between causes of faults</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Plan own work requirements</li> <li>• Plan scope of equipment checks</li> <li>• Plan and organise activities</li> <li>• Identify tasks to achieve team goals</li> <li>• Organise allocation of tasks</li> <li>• Monitor completion of allocated tasks</li> <li>• Develop and adjust a production schedule</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Plan own work requirements from production requests</li> <li>• Operate within appropriate time constraints and work standards</li> <li>• Select and use appropriate equipment, materials, processes and procedures</li> <li>• Plan to ensure effective production</li> <li>• Apply workplace procedures</li> <li>• Identify resource requirements, document and monitor</li> <li>• Recognise limitations and seek timely advice</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Ask questions to gain information</li> <li>• Identify sources of information to expand knowledge and understanding</li> <li>• Participate in improvement procedures</li> <li>• Participate in development of continuous improvement strategies</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Operation and adjustment of processes</li> <li>• Start up and shut down equipment</li> <li>• Set up equipment</li> <li>• Monitor product/process quality</li> <li>• Function and operating principles of equipment, machine components</li> <li>• Maintain computer based workplace records</li> </ul>

## MSM30216 Certificate III in Surface Preparation and Coating Application

Communication	<ul style="list-style-type: none"> <li>• Maintain communication about multiple subjects and with multiple audiences</li> <li>• Complete incident and other reports</li> <li>• Use technical information and manufacturer information</li> <li>• Collect, analyse and organise information</li> <li>• Communicate ideas and information</li> <li>• Use and contribute to workplace documentation</li> <li>• Maintain workplace records</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Identify and describe own role and role of others</li> <li>• Work within a team</li> <li>• Resolve conflicts between team members</li> <li>• Teamwork strategies</li> </ul>
Problem solving	<ul style="list-style-type: none"> <li>• Recognise a problem or a potential problem</li> <li>• Determine problems needing priority action</li> <li>• Refer problems outside area of responsibility to appropriate person</li> <li>• Identify appropriate theory base for problem</li> <li>• Seek information and assistance as required to solve problems</li> <li>• Solve problems within area of responsibility</li> <li>• Follow through items initiated until final resolution has occurred</li> <li>• Identify and isolate faults in equipment</li> <li>• Use a range of formal problem solving techniques</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Identify the most appropriate process conditions for equipment</li> <li>• Determine problems needing action</li> <li>• Recommend required action</li> <li>• Report problems outside area of responsibility</li> <li>• Distinguish between causes of faults</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Prioritise actions to achieve required outcomes</li> <li>• Plan own work requirements and assist others to plan theirs</li> <li>• Plan and organise activities</li> <li>• Identify tasks to achieve team goals</li> <li>• Organise allocation of tasks</li> <li>• Monitor completion of allocated tasks</li> <li>• Develop and adjust a production schedule</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Plan own work requirements from job requests</li> <li>• Operate within appropriate time constraints and work standards</li> <li>• Select and use appropriate equipment, materials, processes and procedures</li> <li>• Plan to ensure effective production</li> <li>• Apply standard procedures</li> <li>• Identify resource requirements</li> <li>• Recognise limitations and seek timely advice</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Ask questions to gain information</li> <li>• Identify sources of information to expand knowledge and understanding</li> <li>• Participate in improvement procedures</li> <li>• Participate in development of continuous improvement strategies</li> <li>• Assist others develop competency</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Operate and adjust equipment</li> <li>• Start up and shut down equipment</li> <li>• Set up equipment</li> <li>• Monitor quality</li> <li>• Function and operating principles of equipment</li> <li>• Maintain workplace records</li> </ul>



## MSM30318 Certificate III in Manufactured Mineral Products

Communication	<ul style="list-style-type: none"> <li>• Maintain communication about multiple subjects and with multiple audiences</li> <li>• Complete incident and other reports</li> <li>• Use technical information and manufacturer information</li> <li>• Collect, analyse and organise information</li> <li>• Communicate ideas and information</li> <li>• Use and contribute to workplace documentation</li> <li>• Maintain workplace records</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Identify and describe own role and role of others</li> <li>• Work within a team</li> <li>• Resolve conflicts between team members</li> <li>• Use teamwork strategies</li> </ul>
Problem solving	<ul style="list-style-type: none"> <li>• Recognise a problem or a potential problem</li> <li>• Determine problems needing priority action</li> <li>• Refer problems outside area of responsibility to appropriate person</li> <li>• Identify appropriate theory base for problem</li> <li>• Seek information and assistance as required to solve problems</li> <li>• Solve problems within area of responsibility</li> <li>• Follow through items initiated until final resolution has occurred</li> <li>• Identify and isolate faults in equipment</li> <li>• Use a range of formal problem solving techniques</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Identify the most appropriate process conditions for equipment</li> <li>• Determine problems needing action</li> <li>• Recommend required action</li> <li>• Report problems outside area of responsibility</li> <li>• Distinguish between causes of faults</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Prioritise actions to achieve required outcomes</li> <li>• Plan own work requirements and assist others to plan theirs</li> <li>• Plan and organise activities</li> <li>• Identify tasks to achieve team goals</li> <li>• Organise allocation of tasks</li> <li>• Monitor completion of allocated tasks</li> <li>• Develop and adjust a production schedule</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Plan own work requirements from job requests</li> <li>• Operate within appropriate time constraints and work standards</li> <li>• Select and use appropriate equipment, materials, processes and procedures</li> <li>• Plan to ensure effective production</li> <li>• Apply standard procedures</li> <li>• Identify resource requirements</li> <li>• Recognise limitations and seek timely advice</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Ask questions to gain information</li> <li>• Identify sources of information to expand knowledge and understanding</li> <li>• Participate in improvement procedures</li> <li>• Participate in development of continuous improvement strategies</li> <li>• Assist others develop competency</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Operate and adjust equipment</li> <li>• Start up and shut down equipment</li> <li>• Set up equipment</li> <li>• Monitor quality</li> <li>• Function and operating principles of equipment</li> <li>• Maintain workplace records</li> </ul>

## MSM31015 Certificate III in Recreational Vehicle Service and Repair

Communication	<ul style="list-style-type: none"> <li>• Maintaining communication about multiple subjects and with multiple audiences</li> <li>• Completing incident and other reports</li> <li>• Using technical information and manufacturer information</li> <li>• Collecting, analysing and organising information</li> <li>• Communicating ideas and information</li> <li>• Using and contributing to workplace documentation</li> <li>• Maintaining workplace records</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Identifying and describing own role and role of others</li> <li>• Working within a team</li> <li>• Resolving conflicts between team members</li> <li>• Using teamwork strategies</li> </ul>
Problem solving	<ul style="list-style-type: none"> <li>• Recognising problems or potential problems</li> <li>• Determining problems needing priority action</li> <li>• Referring problems outside area of responsibility to appropriate person with possible causes</li> <li>• Identifying appropriate theory base for problem</li> <li>• Seeking information and assistance as required to solve problems</li> <li>• Solving problems within area of responsibility</li> <li>• Following through items initiated until final resolution has occurred</li> <li>• Identifying and isolating faults in equipment</li> <li>• Using a range of formal problem-solving techniques</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Identifying the most appropriate process conditions for equipment</li> <li>• Determining problems needing action</li> <li>• Recommending required action</li> <li>• Reporting problems outside area of responsibility</li> <li>• Distinguishing between causes of faults</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Prioritising actions to achieve required outcomes</li> <li>• Planning own work requirements and assisting others to plan theirs</li> <li>• Planning and organising activities</li> <li>• Identifying tasks to achieve team goals</li> <li>• Organising allocation of tasks</li> <li>• Monitoring completion of allocated tasks</li> <li>• Developing and adjusting a production schedule</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Planning own work requirements from job requests</li> <li>• Operating within appropriate time constraints and work standards</li> <li>• Selecting and using appropriate equipment, materials, processes and procedures</li> <li>• Planning to ensure effective production</li> <li>• Applying standard procedures</li> <li>• Identifying, documenting and monitoring resource requirements</li> <li>• Recognising limitations and seeking timely advice</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Asking questions to gain information</li> <li>• Identifying sources of information to expand knowledge and understanding</li> <li>• Participating in improvement procedures</li> <li>• Participating in development of continuous improvement strategies</li> <li>• Helping others develop competency</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Operating and adjusting equipment</li> <li>• Starting up and shutting down equipment</li> <li>• Setting up equipment</li> <li>• Monitoring quality</li> <li>• Understanding function and operating principles of equipment</li> <li>• Maintaining workplace records</li> </ul>

## MSM31115 Certificate III in Recreational Vehicle Manufacturing

Communication	<ul style="list-style-type: none"> <li>• Maintaining communication about multiple subjects and with multiple audiences</li> <li>• Completing incident and other reports</li> <li>• Using technical and manufacturer information</li> <li>• Collecting, analysing and organising information</li> <li>• Communicating ideas and information</li> <li>• Using and contributing to workplace documentation</li> <li>• Maintaining workplace records</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Identifying and describing own role and role of others</li> <li>• Working within a team</li> <li>• Resolving conflicts between team members</li> <li>• Using teamwork strategies</li> </ul>
Problem solving	<ul style="list-style-type: none"> <li>• Recognising problems or potential problems</li> <li>• Determining problems needing priority action</li> <li>• Referring problems outside area of responsibility to appropriate person, with possible causes</li> <li>• Identifying appropriate theory base for problem</li> <li>• Seeking information and assistance as required to solve problems</li> <li>• Solving problems within area of responsibility</li> <li>• Following through items initiated until final resolution has occurred</li> <li>• Identifying and isolating faults in equipment</li> <li>• Using a range of formal problem-solving techniques</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Identifying the most appropriate process conditions for equipment</li> <li>• Determining problems needing action</li> <li>• Recommending required action</li> <li>• Reporting problems outside area of responsibility</li> <li>• Distinguishing between causes of faults</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Prioritising actions to achieve required outcomes</li> <li>• Planning own work requirements and assisting others to plan theirs</li> <li>• Planning and organising activities</li> <li>• Identifying tasks to achieve team goals</li> <li>• Organising allocation of tasks</li> <li>• Monitoring completion of allocated tasks</li> <li>• Developing and adjusting a production schedule</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Planning own work requirements from job requests</li> <li>• Operating within appropriate time constraints and work standards</li> <li>• Selecting and using appropriate equipment, materials, processes and procedures</li> <li>• Planning to ensure effective production</li> <li>• Applying standard procedures</li> <li>• Identifying documenting and monitoring resource requirements</li> <li>• Recognising limitations and seeking timely advice</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Asking questions to gain information</li> <li>• Identifying sources of information to expand knowledge and understanding</li> <li>• Participating in improvement procedures</li> <li>• Participating in development of continuous improvement strategies</li> <li>• Helping others develop competency</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Operating and adjusting equipment</li> <li>• Starting up and shutting down equipment</li> <li>• Setting up equipment</li> <li>• Monitoring quality</li> <li>• Understanding function and operating principles of equipment</li> <li>• Maintaining workplace records</li> </ul>

## MSM31215 Certificate III in Recreational Vehicle and Accessories Retailing

Communication	<ul style="list-style-type: none"> <li>Using questioning and active listening to ascertain and respond to customer needs to ensure customers enjoy a positive experience that reflects business values</li> <li>Regularly carrying out verbal instructions from other team members and supervisors</li> <li>Reading and interpreting simple workplace documents, completing simple written workplace forms and sharing work-related information with other team members</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>Effectively participating in retail store teams</li> <li>working independently to complete own tasks and supporting other team members where appropriate</li> <li>Leading small retail teams, where required, in the context of the job role</li> <li>Mentoring and supporting other team members</li> </ul>
Problem solving	<ul style="list-style-type: none"> <li>Demonstrating sensitivity to customer needs and concerns</li> <li>Anticipating problems and acting to avoid them where possible</li> <li>Solving a range of operational retail store problems individually or in the context of a team structure where, after clarification, existing policies and infrastructure may be applied to source information and resources and develop practical and sustainable solutions</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>Looking for opportunities to do things better and suggesting ideas to other team members and supervisors in the context of the job role</li> <li>Translating ideas into action by positively accepting and adapting to changes in procedures or arrangements at the store level</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>Establishing and communicating clear goals and deliverables for self and team members within the context of organisation objectives and the current store situation</li> <li>Coordinating resources to ensure that work is carried out according to timelines and priorities</li> <li>Coordinating and/or implementing changes arising from continuous improvement processes</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>Understanding how a personal job role fits into the context of the wider business values and directions</li> <li>Working within the store culture by practising inclusive behaviour, effective management of personal presentation, hygiene and time</li> <li>Efficiently prioritising and completing delegated tasks</li> <li>Maintaining own knowledge of the job role, reviewing own performance and actively seeking and acting upon advice and guidance</li> </ul>
Learning	<ul style="list-style-type: none"> <li>Identifying personal strengths and weaknesses in the context of the job role and recognising how to personally learn best at work</li> <li>Seeking opportunities for formal education in the context of a current role or future retail job opportunities</li> <li>Accepting opportunities to learn new ways of doing things and sharing knowledge and skills with other store team members</li> </ul>
Technology	<ul style="list-style-type: none"> <li>Using of point-of-sale systems and/or selecting and using a range of other retail technology in the context of available equipment and store procedures</li> <li>Recognising and reporting faulty equipment and following store work health and safety (WHS) procedures</li> </ul>

## MSM40116 Certificate IV in Process Manufacturing

Communication	<ul style="list-style-type: none"> <li>• Complete workplace documentation and records</li> <li>• Use communication technologies efficiently</li> <li>• Develop work instructions, specifications and procedures</li> <li>• Communicate with all team members</li> <li>• Demonstrate effective and appropriate communication and interpersonal skills when dealing with clients</li> <li>• Use most appropriate communication method given priority, cost and customer facilities</li> <li>• Access, interpret and apply technical information</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Work cooperatively with people of different ages, gender, race or religion</li> <li>• Liaise with, and provide support to, other team members</li> <li>• Work as part of a team</li> <li>• Identify and manage performance required to meet internal and external customer needs in own work and team</li> <li>• Manage technical processes and provide problem solving support to others</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Investigate problem causes</li> <li>• Identify, rectify or report potential difficulties associated with manufacture of products or provision of services</li> <li>• Identify environmental features, regulations, insurance requirements, legal requirements and other factors which may affect the product or service to be provided</li> <li>• Use material and process knowledge to solve problems</li> <li>• Identify hazards and suggest control measures</li> <li>• Determine production requirements</li> <li>• Conduct tests and analyse results to determine and assess production requirements</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Seek feedback on products, processes and procedures</li> <li>• Gather and analyse information and apply to work-related processes</li> <li>• Record information on the quality and other indicators of products</li> <li>• Support achievement of efficient production processes</li> <li>• Determine and act on situations requiring further information or problem solving</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Identify hazards and implement appropriate hazard control measures</li> <li>• Demonstrate time management skills</li> <li>• Source and prepare materials and resources</li> <li>• Sequence work to maximise safety and productivity</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Interpret and apply relevant Acts and regulations</li> <li>• Keep the work area clean and tidy at all times</li> <li>• Monitor own work and work of team and identify and act on any quality issues</li> <li>• Understand own work activities</li> <li>• Manage own time to meet deadlines</li> <li>• Implement workplace procedures and instructions</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Implement learning activities, as appropriate, to ensure achievement of specified production requirements</li> <li>• Assess competencies in meeting job requirements</li> <li>• Be supportive, assertive and use interpersonal skills</li> <li>• Identify own training needs and seek skill development if required</li> <li>• Gather feedback on own work to assess effectiveness in meeting objectives and integrate information into own practice</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Use computer software applications effectively</li> <li>• Work with technology safely and according to workplace standards</li> <li>• Help others use technology efficiently and safely</li> <li>• Use testing technology</li> </ul>

## MSM41015 Certificate IV in Recreational Vehicles

Communication	<ul style="list-style-type: none"> <li>• Completing workplace documentation and records</li> <li>• Using communication technologies efficiently</li> <li>• Developing work instructions, specifications and procedures</li> <li>• Communicating with all team members</li> <li>• Demonstrating effective and appropriate communication and interpersonal skills when dealing with clients</li> <li>• Using most appropriate communication method given priority, cost and customer facilities</li> <li>• Accessing, interpreting and applying technical information</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Working cooperatively with people of different ages, gender, race or religion</li> <li>• Liaising with and providing support to other team members</li> <li>• Working as part of a team</li> <li>• Identifying and managing performance required to meet internal and external customer needs in own work and team</li> <li>• Managing technical processes and providing problem-solving support to others</li> </ul>
Problem solving	<ul style="list-style-type: none"> <li>• Investigating problem causes</li> <li>• Identifying, rectifying or reporting potential difficulties associated with manufacture of products or provision of services</li> <li>• Identifying environmental features, regulations, insurance requirements, legal requirements and other factors which may affect the product or service to be provided</li> <li>• Using material and process knowledge to solve problems</li> <li>• Identifying hazards and suggesting control measures</li> <li>• Determining production requirements</li> <li>• Conducting tests and analysing results to determine and assess production requirements</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Seeking feedback on products, processes and procedures</li> <li>• Gathering and analysing information and applying to work-related processes</li> <li>• Recording information on the quality and other indicators of products</li> <li>• Supporting achievement of efficient production processes</li> <li>• Determining and acting on situations requiring further information or problem solving</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Identifying hazards and implementing appropriate hazard control measures</li> <li>• Demonstrating time-management skills</li> <li>• Sourcing and preparing materials and resources</li> <li>• Sequencing work to maximise safety and productivity</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Interpreting and applying relevant Acts and regulations</li> <li>• Keeping the work area clean and tidy at all times</li> <li>• Monitoring own work and work of team, and identifying and acting on any quality issues</li> <li>• Understanding own work activities</li> <li>• Managing own time to meet deadlines</li> <li>• Implementing workplace procedures and instructions</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Implementing learning activities as appropriate to ensure achievement of specified production requirements</li> <li>• Assessing competencies in meeting job requirements</li> <li>• Being supportive and assertive, and using interpersonal skills</li> <li>• Identifying own training needs and seeking skill development if required</li> <li>• Gathering feedback on own work to assess effectiveness in meeting objectives and integrating information into own practice</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Using computer software applications effectively</li> <li>• Working with technology safely and according to workplace standards</li> <li>• Helping others use technology efficiently and safely</li> <li>• Using testing technology</li> </ul>

## MSM41115 Certificate IV in Recreational Vehicle and Accessories Retailing

Communication	<ul style="list-style-type: none"> <li>Negotiating effectively with team members and other managers on business values, directions and day-to-day operational matters</li> <li>Reading, analysing and communicating workplace information to team members and other managers</li> <li>Writing reports and completing business documentation in the context of the job role</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>Leading a retail or wholesale business team, and mentoring and supporting team members in the context of a retail supervision or management role</li> <li>Effectively participating in wider retail business supervisory/management teams</li> <li>Working independently to complete own tasks and supporting other team members, where appropriate</li> </ul>
Problem solving	<ul style="list-style-type: none"> <li>Implementing customer service strategies</li> <li>Anticipating problems and acting to mitigate where possible</li> <li>Solving a range of operational retail or wholesale operational business problems, individually or in the context of a wider team management structure</li> <li>Clarifying issues and applying existing policies and infrastructure to source information and resources, and developing practical and sustainable solutions</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>Creating an operational business team customer service and continuous improvement environment across all performance areas</li> <li>Providing positive feedback, encouraging team members to do things better and be personally receptive to team members ideas</li> <li>Translating ideas into action by positively accepting and initiating changes in procedures or arrangements at the business level</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>Establishing and communicating clear goals and deliverables for self and team members within the context of organisation objectives and the current business situation</li> <li>Coordinating resources to ensure that work is carried out according to timelines and priorities</li> <li>Coordinating and/or implementing changes arising from continuous improvement processes</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>Understanding how own personal job role fits into the context of the wider business values and directions</li> <li>Working within the retail or wholesale business culture by practising inclusive behaviour, effective management of personal presentation, hygiene and time-management</li> <li>Efficiently prioritising and completing delegated tasks</li> <li>Maintaining own knowledge of the job role, reviewing own performance and actively seeking and acting upon advice and guidance</li> </ul>
Learning	<ul style="list-style-type: none"> <li>Identifying personal strengths and weaknesses in the context of the job role and recognising how to personally learn best at work</li> <li>Seeking opportunities for formal education in the context of a current role or future retail job opportunities</li> <li>Accepting opportunities to learn new ways of doing things and sharing knowledge and skills with other business managers and team members</li> </ul>
Technology	<ul style="list-style-type: none"> <li>Adapting to new business-related technology skill requirements</li> <li>Selecting and using retail or other information and communications technology, where relevant, to support business operations and planning in the context of key business performance objectives and personal job role.</li> </ul>

## MSM50316 Diploma of Production Management

Communication	<ul style="list-style-type: none"> <li>• Manage implementation of production improvement procedures and develop and distribute related information</li> <li>• Develop standardised documentation on behalf of an area or group of work teams</li> <li>• Share and discuss information with others about enterprise activities</li> <li>• Develop and communicate workplace procedures</li> <li>• Provide information and clarifications to team leaders and other employees on workplace procedures in relation to production</li> <li>• Provide and interpret instructions, specifications, standard operating procedures and other work-related documents</li> <li>• Provide assistance or information to relevant personnel</li> <li>• Debrief on workplace changes with relevant stakeholders</li> <li>• Record production, emissions and other work-related information</li> <li>• Access and use workplace communication tools and equipment</li> <li>• Apply numeracy skills to work procedures</li> <li>• Provide information about team activities to managers, supervisors and customers</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Identify roles of work teams where teamwork is used as the form of work organisation</li> <li>• Supervise and lead others in a production environment</li> <li>• Share work-related information with peers, including team members, supervisors and management</li> <li>• Identify hazards to employees and visitors</li> <li>• Identify the value chain and advise other employees as to how they can contribute to the final quality of the product</li> <li>• Review changes to work practices and work relationships with team leaders and other employees</li> <li>• Provide assistance with planning work operations, as required</li> <li>• Seek assistance with work operations from specialists and other employees, as required</li> <li>• Participate in multidisciplinary teams, as required</li> </ul>
Problem-solving	<ul style="list-style-type: none"> <li>• Monitor production and maintenance activities</li> <li>• Analyse inconsistencies, non-compliances, faults or hazards</li> <li>• Identify factors within work area that are a constraint to work efficiency or reaching of production outcomes</li> <li>• Identify essential and non-essential practices</li> <li>• Implement methods of increasing features/benefits of products or processes</li> <li>• Monitor responsibilities of teams and make improvements to work organisation</li> <li>• Identify process steps which cause a problem and implement improvement processes</li> <li>• Monitor production performance and implement improvement processes</li> <li>• Compare shift or area required performance with actual performance</li> <li>• Identify situations where compliance to specifications or safety standards is unlikely</li> <li>• Identify, recommend and implement improvements</li> <li>• Identify causes of identified faults and take appropriate action</li> <li>• Investigate causes of deviations from targets and standards in relation to production</li> <li>• Undertake root cause analysis</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Manage procedures and systems for optimum outcomes</li> <li>• Analyse feedback on procedures and systems</li> <li>• Analyse problems, implications or suggestions for improvements</li> <li>• Adjust work activities according to changes in customer requirements</li> </ul>



	<ul style="list-style-type: none"> <li>• Identify methods of increasing contribution of work teams to production</li> <li>• Identify and implement changes and improvements</li> <li>• Monitor processes and equipment to ensure cost efficiency</li> <li>• Implement and monitor work practices to reduce waste</li> <li>• Participate in multidisciplinary teams to develop new products or processes</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Ensure work areas comply with sustainability obligations and requirements</li> <li>• Identify and manage processes, tools and materials</li> <li>• Implement improvements in accordance with procedures</li> <li>• Distinguish between essential and non-essential practices</li> <li>• Implement use of planning tools within work of teams</li> <li>• Determine and prioritise required actions</li> <li>• Collect, organise and analyse information from work activities</li> <li>• Monitor work activities according to safety and workplace standards</li> <li>• Set production targets and outcomes</li> <li>• Interpret data and information as required by own job</li> <li>• Ask questions to ensure there is understanding of work requirements in teams and among other employees</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Recommend methods of increasing own contribution to the value chain</li> <li>• Adjust work processes according to procedures and customer requirements</li> <li>• Identify and manage impact of change in own work</li> <li>• Minimise waste in own work activity</li> <li>• Assess own work performance</li> <li>• Set personal objectives for work performance</li> <li>• Manage own time</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Identify skill requirements of self and team members</li> <li>• Arrange skill development training for self and others</li> <li>• Adapt to changing work requirements</li> <li>• Ask questions to aid learning of others</li> <li>• Identify personal skill gaps and additional skill needs</li> <li>• Ask questions to ensure understanding of own work requirements</li> <li>• Monitor own work and identify areas for improvement</li> <li>• Seek feedback on work performance</li> <li>• Provide feedback on work performance to team leaders and team members</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Monitor technology to ensure production according to legislative requirements and workplace standards</li> <li>• Identify equipment and processes appropriate for jobs and skill levels of employees</li> <li>• Provide appropriate equipment to ensure safety and efficiency according to skill levels of employees</li> <li>• Assess operational efficiency of technology within own skill level and that of team members</li> <li>• Analyse data and other information from equipment reports</li> <li>• Conduct failure mode effects analyses</li> <li>• Use information technology appropriate for job</li> <li>• Manage maintenance procedures appropriate to job and processes according to skill levels of team members</li> </ul>

## MSM51015 Diploma of Recreational Vehicles

Communication	<ul style="list-style-type: none"> <li>• Managing implementation of work health and safety (WHS) procedures, and developing and distributing related safety information</li> <li>• Developing standardised documentation on behalf of an area or group of work teams</li> <li>• Sharing and discussing information with others about activities</li> <li>• Developing and communicating workplace procedures</li> <li>• Providing information and clarifications to team leaders and other employees on workplace procedures</li> <li>• Providing and interpreting instructions, specifications, standard operating procedures (SOPs) and other work-related documents</li> <li>• Providing assistance or information to relevant personnel</li> <li>• Debriefing on workplace changes with relevant stakeholders</li> <li>• Recording production or other work-related information</li> <li>• Accessing and using workplace communication tools and equipment</li> <li>• Applying numeracy skills to work procedures</li> <li>• Providing information about team activities to managers, supervisors and customers</li> </ul>
Teamwork	<ul style="list-style-type: none"> <li>• Identifying roles of work teams where teamwork is used as the form of work organisation</li> <li>• Supervising and leading others in a production environment</li> <li>• Sharing production or work-related information with peers, including team members, supervisors and management</li> <li>• Identifying hazards to employees and visitors</li> <li>• Identifying the value chain and advising other employees as to how they can contribute to the final quality of the product</li> <li>• Reviewing changes to work practices and work relationships with team leaders and other employees</li> <li>• Providing assistance with planning work operations, as required</li> <li>• Seeking assistance with work operations from specialists and other employees, as required</li> <li>• Participating in multidisciplinary teams, as required</li> </ul>
Problem solving	<ul style="list-style-type: none"> <li>• Monitoring production and maintenance activities</li> <li>• Analysing inconsistencies, non-compliances, faults or hazards</li> <li>• Identifying factors within work area that are a constraint to work efficiency or reaching of production outcomes</li> <li>• Identifying essential and non-essential practices</li> <li>• Implementing methods of increasing features/benefits of products or processes</li> <li>• Monitoring responsibilities of teams and making improvements to work organisation</li> <li>• Identifying process steps which cause a problem and implementing improvement processes</li> <li>• Monitoring WHS performance and implementing WHS improvement processes</li> <li>• Comparing shift or area required performance with actual performance</li> <li>• Identifying situations where compliance to specifications or safety standards is unlikely</li> <li>• Identifying, recommending and implementing improvements</li> <li>• Distinguishing between random and identifiable causes of work problems</li> <li>• Identifying causes of identified faults and taking appropriate action</li> <li>• Investigating causes of quality deviations</li> <li>• Undertaking root cause analysis</li> <li>• Identifying deviations and fault patterns</li> </ul>
Initiative and enterprise	<ul style="list-style-type: none"> <li>• Managing procedures and systems for optimum outcomes</li> <li>• Analysing feedback on procedures and systems</li> <li>• Analysing problems, implications or suggestions for improvements</li> <li>• Adjusting work activities according to changes in customer requirements</li> </ul>

	<ul style="list-style-type: none"> <li>• Identifying methods of increasing contribution of work teams to the value chain</li> <li>• Identifying and implementing changes and improvements</li> <li>• Monitoring processes and equipment to ensure cost-efficiency</li> <li>• Managing 5S procedures</li> <li>• Implementing and monitoring work practices to reduce waste</li> <li>• Participating in multidisciplinary teams to develop new products or processes</li> </ul>
Planning and organising	<ul style="list-style-type: none"> <li>• Planning work of teams to meet required standards</li> <li>• Ensuring work areas comply with WHS procedures</li> <li>• Identifying and managing processes, tools and materials</li> <li>• Implementing improvements in accordance with procedures</li> <li>• Monitoring and adjusting production/process</li> <li>• Distinguishing between essential and non-essential practices</li> <li>• Implementing use of planning tools within work teams</li> <li>• Monitoring implementation of 5S procedures in teams</li> <li>• Determining and prioritising required actions</li> <li>• Collecting, organising and analysing information from work activities</li> <li>• Monitoring work activities according to safety and workplace standards</li> <li>• Setting production targets and outcomes</li> <li>• Interpreting data and information as required by own job</li> <li>• Asking questions to ensure understanding of work requirements in teams and among other employees</li> </ul>
Self-management	<ul style="list-style-type: none"> <li>• Recommending methods of increasing own contribution to the value chain</li> <li>• Adjusting work processes according to procedures and customer requirements</li> <li>• Identifying and managing impact of change in own work</li> <li>• Minimising waste in own work activity</li> <li>• Assessing own work performance</li> <li>• Setting personal objectives for work performance</li> <li>• Managing own time</li> </ul>
Learning	<ul style="list-style-type: none"> <li>• Identifying skill requirements of self and team members</li> <li>• Arranging skill development training for self and others</li> <li>• Adapting to changing work requirements</li> <li>• Asking questions to aid learning of others</li> <li>• Identifying personal skill gaps and additional skills needs</li> <li>• Asking questions to ensure understanding of own work requirements</li> <li>• Monitoring own work and identifying areas for improvement</li> <li>• Seeking feedback on work performance</li> <li>• Providing feedback on work performance to team leaders and team members</li> </ul>
Technology	<ul style="list-style-type: none"> <li>• Monitoring technology to ensure safety according to legislative requirements and workplace standards</li> <li>• Identifying equipment and processes appropriate for jobs and skill levels of employees</li> <li>• Providing appropriate equipment to ensure safety and efficiency according to skill levels of employees</li> <li>• Assessing operational efficiency of technology within own skill level and that of team members</li> <li>• Acting on reports of faulty operation of equipment</li> <li>• Analysing data and other information from equipment reports</li> <li>• Conducting failure mode effects analyses</li> <li>• Using information technology appropriate for job</li> <li>• Managing maintenance procedures appropriate to job and processes according to skill levels of team members</li> </ul>

## Delivering training and conducting assessment

### Skilled trainers and assessors

Assessors must satisfy the assessor competency requirements that are in place at the time of the assessment as set by the VET regulator.

The RTO's training and assessment must be delivered only by persons who have:

- vocational competencies at least to the level being delivered and assessed
- current industry skills directly relevant to the training and assessment being provided
- current knowledge and skills in vocational training and learning that informs their training and assessment
- and the specified training and assessment credential.

*Industry experts may also be involved in the assessment judgement, working alongside the trainer and/or assessor to conduct the assessment.*

Currency can be demonstrated through one or more of:

- being currently employed undertaking the type of work being assessed
- being employed by the organisation undertaking the type of work being assessed and having maintained currency in accordance with that organisation's policies and procedures
- having consulted/had contact with an organisation undertaking the type of work being assessed within the last twelve months, the consultation/contact being related to assessment
- conducting on-the-job training/assessments of the type of work being assessed
- being an active member of a relevant professional body and participating in activities relevant to the assessment of this type of work.

### Mode of delivery

Training and assessment of the MSM Manufacturing Training Package may be face to face, online, through workplace training or a mixture of different modes/blended delivery.

Students can be assessed by RPL, on the job, off the job or a combination as long as the Principles of Assessment and Rules of Evidence are met.

### Conducting assessments

Units of competency should be assessed holistically and the judgement of competence based on a holistic assessment of the assessment requirements.

The collection of performance evidence:

- should occur over a range of situations which include typical disruptions to normal, smooth operation
- will typically include a supervisor (third party) report or other evidence, focusing on consistent performance and problem recognition and solving. A supervisor/third-party report must be prepared by someone who has a direct, relevant, current relationship with the person being assessed and who is in a position to form a judgement on workplace performance relevant to the unit of competency
- may use industry-based simulation for all or part of the unit, as specified in each unit, particularly where safety, lack of opportunity or significant cost is an issue.

Assessment should occur in operational workplace situations. Where this is not possible or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment that reflects realistic operational workplace conditions that cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.

Knowledge evidence may be collected concurrently with performance evidence (provided a record is kept) or through an independent process, such as workbooks, written assessments or interviews (provided a record is kept).

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications associated with the unit.

Foundation skills are integral to competent performance of the unit and should not be assessed separately.

As a minimum, assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

## Links

Australian Qualifications Framework: First edition, July 2011: [www.aqf.edu.au/](http://www.aqf.edu.au/)

TGA website, training packages: [www.training.gov.au](http://www.training.gov.au)

The Australian Industry and Skills Committee (AISC) <https://www.aisc.net.au/> Department of Education and Training: <https://www.education.gov.au/> Australian Skills Quality Authority (ASQA): [www.asqa.gov.au](http://www.asqa.gov.au)

Victorian Registration and Qualifications Authority: <http://www.vrqa.vic.gov.au>

WA Training Accreditation Council: <http://www.tac.wa.gov.au>

The Australian Apprenticeships site: [www.australianapprenticeships.gov.au](http://www.australianapprenticeships.gov.au) offers information about traineeships and apprenticeships and includes links to state and territory authorities (STAs) that monitor provision.

### State Training Authorities

Australian Capital Territory: <http://www.det.act.gov.au> New South Wales:

<https://www.det.nsw.edu.au> Northern Territory: <https://business.nt.gov.au/> Queensland:

<http://training.qld.gov.au>

South Australia: <http://www.tasc.sa.gov.au/> Victoria: <http://www.education.vic.gov.au>

Tasmania: <http://www.education.tas.gov.au> Western Australia: <http://www.dtwd.wa.gov.au>

LiteracyNet – key information about Australian adult literacy activities and links to a range of program, professional development, resource and research sites:

<https://www.education.gov.au/literacy-net>

National Foundation Skills Strategy for Adults:

<https://www.education.gov.au/national-foundation-skills-strategy-adults>

## Appendix A: Mapping of qualifications

### MSM Release 2.0 to Release 3.0

(Release 3 qualification)

\*E: equivalent, N: not equivalent

MSM Manufacturing Training Package Release 2.0	MSM Manufacturing Training Package Release 3.0	Comments	E/N
MSM10116 Certificate I in Process Manufacturing	MSM10116 Certificate I in Process Manufacturing	no changes	E
MSM10216 Certificate I in Manufacturing (Pathways)	MSM10216 Certificate I in Manufacturing (Pathways)	no changes	E
MSM20116 Certificate II in Process Manufacturing	MSM20116 Certificate II in Process Manufacturing	no changes	E
MSM20216 Certificate II in Manufacturing Technology	MSM20216 Certificate II in Manufacturing Technology	no changes	E
MSM21015 Certificate II in Recreational Vehicle Service and Repair	MSM21015 Certificate II in Recreational Vehicle Service and Repair	no changes	E
MSM21115 Certificate II in Recreational Vehicle Manufacturing	MSM21115 Certificate II in Recreational Vehicle Manufacturing	no changes	E
MSM30116 Certificate III in Process Manufacturing	MSM30116 Certificate III in Process Manufacturing	Additional electives	E
MSM30216 Certificate III in Surface Preparation and Coating Application	MSM30216 Certificate III in Surface Preparation and Coating Application	no changes	E
	MSM30318 Certificate III in Manufactured Mineral Products	New qualification. Supersedes and is equivalent to PMC30116 Certificate III in Manufactured Mineral Products	E
MSM31015 Certificate III in Recreational Vehicle Service and Repair	MSM31015 Certificate III in Recreational Vehicle Service and Repair	no changes	E
MSM31115 Certificate III in Recreational Vehicle Manufacturing	MSM31115 Certificate III in Recreational Vehicle Manufacturing	no changes	E
MSM31215 Certificate III in Recreational Vehicle and Accessories Retailing	MSM31215 Certificate III in Recreational Vehicle and Accessories Retailing	no changes	E
MSM40116 Certificate IV in Process Manufacturing	MSM40116 Certificate IV in Process Manufacturing	no changes	E
MSM41015 Certificate IV in Recreational Vehicles	MSM41015 Certificate IV in Recreational Vehicles	no changes	E
MSM41115 Certificate IV in Recreational Vehicle and Accessories Retailing	MSM41115 Certificate IV in Recreational Vehicle and Accessories Retailing	no changes	E
MSM50316 Diploma of Production Management	MSM50316 Diploma of Production Management	no changes	E
MSM51015 Diploma of Recreational Vehicles	MSM51015 Diploma of Recreational Vehicles	no changes	E

## Appendix B: Mapping of units of competency

### MSM Release 2.0 to Release 3.0

(Release 3 units)

\*E: Equivalent, N: Not Equivalent

MSM Manufacturing	Training Package R2.0	MSM Manufacturing	Training Package R3.0		
Code	Title	Code	Title	comment	E/N*
MSMBLIC001	Licence to operate a standard boiler			no change	
MSMBLIC002	Licence to operate an advanced boiler			no change	
MSMENV172	Operate a vacuum loading system			no change	
MSMENV272	Participate in environmentally sustainable work practices			no change	
MSMENV472	Implement and monitor environmentally sustainable work practices			no change	
MSMENV672	Develop workplace policy and procedures for environmental sustainability			no change	
MSMOPS100	Use equipment			no change	
MSMOPS101	Make measurements			no change	
MSMOPS102	Perform tasks to support production			no change	
MSMOPS200	Operate equipment			no change	
MSMOPS201	Cut polymer materials			no change	
MSMOPS202	Fabricate polymer products			no change	
MSMOPS212	Use organisation computers or data systems			no change	
MSMOPS244	Lay out and cut materials			no change	
MSMOPS301	Treat corrosion			no change	
MSMOPS363	Organise on-site work			no change	
MSMOPS400	Optimise process/plant area			no change	
MSMOPS401	Trial new process or product			no change	
MSMOPS601	Design equipment and system modifications			no change	
MSMPCI101	Adapt to work in industry			no change	
MSMPCI102	Apply effective work practices			no change	
MSMPCI103	Demonstrate care and			no change	



MSM Manufacturing	Training Package R2.0	MSM Manufacturing	Training Package R3.0		
Code	Title	Code	Title	comment	E/N*
	apply safe practices at work				
MSMPCII295	Operate manufacturing equipment			no change	
MSMPCII296	Make a small furniture item from timber			no change	
MSMPCII297	Make an object from cloth using an existing pattern			no change	
MSMPCII298	Make an object from metal			no change	
MSMPCII299	Make an object from plastic			no change	
MSMPER200	Work in accordance with an issued permit			no change	
MSMPER201	Monitor and control work permits			no change	
MSMPER202	Observe permit work			no change	
MSMPER205	Enter confined space			no change	
MSMPER300	Issue work permits			no change	
MSMPER400	Coordinate permit process			no change	
		MSMPMC200	Organise self	new	
		MSMPMC300	Produce structural precast concrete	new	
		MSMPMC301	Store materials for production	new	
		MSMPMC302	Operate equipment to blend/mix materials	new	
		MSMPMC303	Operate grinding equipment	new	
		MSMPMC304	Prepare for production	new	
		MSMPMC305	Heat accelerate the curing of precast concrete	new	
		MSMPMC306	Operate crushing equipment	new	
		MSMPMC307	Operate a calcining kiln	new	
		MSMPMC308	Operate slip casting equipment	new	
		MSMPMC309	Finish products after firing	new	
		MSMPMC310	Hand mould products	new	
		MSMPMC311	Operate a firing kiln	new	
		MSMPMC312	Operate glass finishing equipment	new	
		MSMPMC313	Schedule, cut and bend	new	

MSM Manufacturing	Training Package R2.0	MSM Manufacturing	Training Package R3.0		
Code	Title	Code	Title	comment	E/N*
			reinforcement		
		MSMPMC314	Finish green concrete products	new	
		MSMPMC315	Cast moulded concrete products	new	
		MSMPMC316	Finish cured concrete products	new	
		MSMPMC317	Conduct benching operations	new	
		MSMPMC318	Assemble, fabricate and place reinforcement	new	
		MSMPMC319	Finish casting operation	new	
		MSMPMC320	Demould concrete products	new	
		MSMPMC321	Batch mix concrete	new	
		MSMPMC322	Deliver concrete to site	new	
		MSMPMC323	Prepare asphalt	new	
		MSMPMC324	Move materials	new	
		MSMPMC325	Operate bulk materials handling equipment	new	
		MSMPMC326	Deliver customer service	new	
		MSMPMC327	Allocate and complete team tasks	new	
		MSMPMC328	Prepare for and apply shotcrete for installation	new	
		MSMPMC329	Prepare moulds and dies	new	
		MSMPMC330	Produce architectural precast concrete	new	
		MSMPMC400	Carry out stock control	new	
		MSMPMC401	Set up and tune a process	new	
		MSMPMC402	Process raw meal into product	new	
		MSMPMC403	Set up and optimise glass forming process	new	
MSMRV310	Fit recreational vehicle floor			no change	
MSMRV311	Fit furniture in a recreational vehicle			no change	
MSMRV312	Fit water systems in a recreational vehicle			no change	
MSMRV313	Fit 12 V cable systems			no change	

MSM Manufacturing	Training Package R2.0	MSM Manufacturing	Training Package R3.0		
Code	Title	Code	Title	comment	E/N*
	in a recreational vehicle				
MSMRV314	Construct and fit roof to a recreational vehicle			no change	
MSMRV315	Construct and fit slide out in a recreational vehicle			no change	
MSMRV316	Fit appliances in a recreational vehicle			no change	
MSMRV317	Install solar equipment on a recreational vehicle			no change	
MSMRV318	Fit cladding to a recreational vehicle			no change	
MSMRV319	Fit front and rear moulds to a recreational vehicle			no change	
MSMRV320	Fit windows and doors to a recreational vehicle			no change	
MSMRV321	Fit required external items to a recreational vehicle			no change	
MSMRV322	Fit required external electrical components to a recreational vehicle			no change	
MSMRV323	Fit required internal items to a recreational vehicle			no change	
MSMRV324	Conduct final quality inspection for a recreational vehicle			no change	
MSMRV325	Fabricate a chassis and suspension for a recreational vehicle			no change	
MSMRV350	Remove and replace a recreational vehicle roof			no change	
MSMRV351	Remove and replace a recreational vehicle floor			no change	
MSMRV352	Remove and replace a recreational vehicle sidewall cladding			no change	
MSMRV353	Remove and replace a recreational vehicle shower cubicle			no change	
MSMRV354	Remove and replace a recreational vehicle shower walls			no change	
MSMRV355	Remove and replace a			no change	

MSM Manufacturing	Training Package R2.0	MSM Manufacturing	Training Package R3.0		
Code	Title	Code	Title	comment	E/N*
	camper/pop-top roof				
MSMRV356	Remove and replace gas struts and roof lifting equipment on a recreational vehicle			no change	
MSMRV357	Remove and replace external components of a recreational vehicle			no change	
MSMRV358	Modify the body of a recreational vehicle			no change	
MSMRV359	Install additional appliances in a recreational vehicle			no change	
MSMRV360	Service camper wind up systems			no change	
MSMRV361	Repair dry rot in a recreational vehicle			no change	
MSMRV362	Install and repair battery systems in a recreational vehicle			no change	
MSMRV363	Complete pre-delivery check of a recreational vehicle			no change	
MSMRV364	Handover a recreational vehicle to a customer			no change	
MSMRV365	Remove and refit body moulding			no change	
MSMRV366	Fit transfers and decals to a recreational vehicle			no change	
MSMRVG201	Tow a recreational vehicle safely			no change	
MSMRVS202	Repair/service LP gas systems in a recreational vehicle			no change	
MSMRVS401	Assess and quote to service a recreational vehicle			no change	
MSMRVT201	Apply technical knowledge of recreational vehicle manufacturing to work activities			no change	
MSMSUP100	Apply workplace procedures			no change	
MSMSUP101	Clean workplace or equipment			no change	
MSMSUP102	Communicate in the workplace			no change	
MSMSUP106	Work in a team			no change	
MSMSUP200	Achieve work			no change	

MSM Manufacturing	Training Package R2.0	MSM Manufacturing	Training Package R3.0		
Code	Title	Code	Title	comment	E/N*
	outcomes				
MSMSUP204	Pack products or materials			no change	
MSMSUP205	Transfer loads			no change	
MSMSUP210	Process and record information			no change	
MSMSUP230	Monitor process operations			no change	
MSMSUP240	Undertake minor maintenance			no change	
MSMSUP273	Handle goods			no change	
MSMSUP280	Manage conflict at work			no change	
MSMSUP291	Participate in continuous improvement			no change	
MSMSUP292	Sample and test materials and product			no change	
MSMSUP292	Sample and test materials and product			no change	
MSMSUP300	Identify and apply process improvements			no change	
MSMSUP301	Apply HACCP to the workplace			no change	
MSMSUP303	Identify equipment faults			no change	
MSMSUP309	Maintain and organise workplace records			no change	
MSMSUP310	Contribute to the development of workplace documentation			no change	
MSMSUP330	Develop and adjust a production schedule			no change	
MSMSUP382	Provide coaching/mentoring in the workplace			no change	
MSMSUP383	Facilitate a team			no change	
MSMSUP390	Use structured problem-solving tools			no change	
MSMSUP400	Develop and monitor quality systems			no change	
MSMSUP404	Coordinate maintenance			no change	
MSMSUP405	Identify problems in fluid power system			no change	
MSMSUP406	Identify faults in electronic control			no change	
MSMTMINS301	Inspect a range of simple measures			no change	
MSMTMINS302	Inspect a range of simple measuring instruments			no change	

MSM Manufacturing	Training Package R2.0	MSM Manufacturing	Training Package R3.0		
Code	Title	Code	Title	comment	E/N*
MSMTMINS401	Inspect a range of weighing instruments			no change	
MSMTMINS402	Inspect liquid measuring instruments using volume measures			no change	
MSMTMINS403	Inspect a range of trading practices			no change	
MSMTMINS404	Inspect a range of pre-packaged products			no change	
MSMTMINS501	Inspect a range of complex measuring instruments			no change	
MSMTMREF301	Use and maintain reference standards			no change	
MSMTMVER301	Verify simple measures			no change	
MSMTMVER302	Verify simple measuring instruments			no change	
MSMTMVER401	Verify weighing instruments			no change	
MSMTMVER402	Verify liquid measuring instruments using volume measures			no change	
MSMTMVER403	Verify inspector's class reference standards			no change	
MSMTMVER501	Verify complex measuring instruments			no change	
MSMWHS100	Follow WHS procedures			no change	
MSMWHS110	Follow emergency response procedures			no change	
MSMWHS200	Work safely			no change	
MSMWHS201	Conduct hazard analysis			no change	
MSMWHS205	Control minor incidents			no change	
MSMWHS210	Undertake first response to non-fire incidents			no change	
MSMWHS212	Undertake first response to fire incidents			no change	
MSMWHS216	Operate breathing apparatus			no change	
MSMWHS217	Gas test atmospheres			no change	
MSMWHS218	Control the risks of falls			no change	
MSMWHS300	Facilitate the implementation of WHS for a work group			no change	
MSMWHS400	Contribute to WHS management system			no change	
MSMWHS401	Assess risk			no change	

MSM Manufacturing	Training Package R2.0	MSM Manufacturing	Training Package R3.0		
Code	Title	Code	Title	comment	E/N*
MSMWHS503	Maintain WHS management system			no change	
MSMWHS510	Manage risk			no change	
MSMWHS601	Develop WHS management system			no change	
MSMWJ201	Use high pressure water jetting equipment			no change	
MSMWJ301	Operate a high pressure water jetting system			no change	
MSMWJ302	Operate a drain cleaning draining system			no change	
MSMWJ303	Operate a vacuum loading system			no change	

## Manufacturing Technology Units of Competency

The following units of competency remain current in MSA07 Manufacturing Training Package

MSATCM301A	Test the mechanical properties of materials
MSATCM302A	Monitor ferrous melting and casting processes
MSATCM303A	Monitor non-ferrous melting and casting processes
MSATCM304A	Interpret basic binary phase diagrams
MSATCM305A	Demonstrate basic knowledge of casting operations
MSATCM401A	Prepare and examine metallographic samples
MSATCM402A	Monitor and test sands, cores and moulds
MSATCM403A	Evaluate mould design and gating
MSATCM404A	Undertake and interpret results of chemical analysis on metal samples
MSATCM405A	Determine and supervise heat treatment of metal
MSATCM406A	Apply basic chemical principles to metallurgy
MSATCM501A	Calculate and predict chemical outcomes in metallurgical situations
MSATCM502A	Identify and describe equipment for mineral and chemical processing plants
MSATCM503A	Recommend a refractory for an application
MSATCM504A	Select metal forming process
MSATCM505A	Select metal joining process
MSATCM506A	Monitor blast furnace operations
MSATCM507A	Monitor primary steel making process
MSATCM508A	Monitor secondary steelmaking operations
MSATCM509A	Recommend ferrous and non ferrous metals or alloys for an application
MSATCM510A	Apply metallurgical principles and techniques in welding and other thermal processes
MSATCM511A	Apply metallurgy principles and practice to determine metal forming and shaping processes
MSATCM512A	Apply metallurgy principles and practice to optimise furnace operation
MSATCM513A	Plan and complete metallurgical projects
MSATCM514A	Select surface treatment methods for metallic components or products
MSATCM515A	Analyse metallurgical failures of components and recommend preventative measures
MSATCM516A	Select non metallic materials for engineering applications
MSATCM517A	Determine corrosion prevention strategies for metal and alloys
MSATCM518A	Interpret complex binary phase diagrams
MSATCS301A	Interpret architectural and engineering design specifications for structural steel detailing
MSATCS302A	Detail bolts and welds for structural steelwork connections
MSATCS501A	Detail standardised structural connections
MSATCS502A	Detail structural steel members
MSATCS503A	Incorporate structural steel detailing into fabrication and construction project management
MSATCS504A	Detail ancillary steelwork



- END -