IMICA01

Contribute to Housekeeping in Motor Vehicle Environments

Overview

This NOS is about the routine maintenance of the workplace, carrying out basic, non-specialist checks of relevant workplace equipment, cleaning the work area and using resources as directed.

Performance criteria

You must be able to:

1. select and use suitable personal protective equipment throughout all housekeeping and equipment maintenance activities
2. select and use cleaning equipment which is of the right type and suitable for the task
3. use resources as directed and for their intended purpose only following workplace procedures
4. follow workplace policies, schedules and manufacturers' instructions when cleaning and maintaining equipment
5. ensure your equipment maintenance activities keep your equipment fit for purpose
6. clean the work area(s), for which you are responsible, at the specified time and frequency
7. store your equipment in a safe manner which permits ease of access and identification for use
8. carry out housekeeping activities safely and in a way which minimises inconvenience to customers and staff
9. ensure your housekeeping activities keep your work area clean and free from debris and waste materials
10. dispose of used cleaning agents, materials and debris to comply with relevant legal, environmental and workplace requirements
11. report any faulty or damaged equipment to the relevant person(s) clearly and promptly
12. report any anticipated delays in completion to the relevant person(s) promptly

Knowledge and understanding

You need to know and understand:

1. the scope of your job responsibilities for the use and maintenance of equipment and your work area
2. workplace policies, schedules and legislation for housekeeping activities and equipment maintenance
3. the manufacturer's requirements for the cleaning and general, non-specialist maintenance of the equipment for which you are responsible
4. the regulations and information sources applicable to workshop cleaning and maintenance activities for which you are responsible
5. the importance of reporting faults quickly to the relevant person
6. the importance of reporting anticipated delays to the relevant person(s) promptly
7. how to select and use equipment appropriate to the task
8. how to store equipment safely and accessibly
9. how to report faulty or damaged equipment
10. how to work safely when cleaning and maintaining equipment
11. how to select and use work area cleaning equipment, materials and agents
12. how to clean and maintain the equipment and work areas for which you are responsible
13. how to dispose of unused cleaning agents, materials and debris to comply with relevant legal, environmental and workplace requirements
14. the properties and hazards associated with the use of cleaning agents and materials
15. the importance of wearing personal protective equipment
16. the importance of using resources as directed and for their intended purpose only

Scope/range

1. Equipment maintenance covers:

a. routine checks on equipment
b. cleaning equipment
c. visual inspection of electrical equipment

2. Housekeeping activities cover:

a. day to day work area cleaning
b. clearing away
c. dealing with spillages
d. disposal of waste, used materials and debris taking into account relevant environmental factors

3. Motor Vehicle could include:

a. Light Vehicles
b. Heavy Vehicles/Commercial Vehicles
c. Motorcycles
d. Lift Trucks
e. Heavy Vehicle Trailers
f. Caravan and Motorhomes

Developed by	IMI
Version Number	2
Date Approved	October 2014
Indicative Review Date	October 2017
Validity	Current
Status	Original
Originating Organisation	IMI
Original URN	IMIARBG1
Relevant Occupations	Accident Repair Technicians; Automotive Aftermarket Electrical Enhancement Technician (Automotive); Auto-electrical Technician (Automotive); Auto and Mobile Installation Technicians; Automotive Paint Supervisor; Automotive Paint Technician; Body Builder (Automotive); Body Builder Workshop Controller (Automotive); Body Repair and Alignment Technician (Automotive); Body Repair Technician (Automotive); Caravan and Motorhome Diagnostic Technician (Automotive); Caravan and Motorhome Service Technician (Automotive); Caravans and Motorhomes Diagnostic Technician (Automotive); Caravans and Motorhomes Service Technician (Automotive); Cosmetic Refinishing Technician (Automotive); Cosmetic Senior Refinishing Technician (Automotive); Heavy Vehicle Diagnostic Technician (Automotive); Heavy Vehicle Fleet/Service Manager (Automotive); Heavy Vehicle Master Technician (Automotive); Heavy Vehicle Service Technician (Automotive); Heavy Vehicle Trailer Diagnostic Technician (Automotive); Heavy Vehicle Trailer Fleet/Service Manager (Automotive); Heavy Vehicle Trailer Master Technician (Automotive); Heavy Vehicle Trailer Service Technician (Automotive); Lift Truck Service Technician (Automotive); Lift Truck Trailer Diagnostic Technician (Automotive);

	Lift Truck Trailer Master Technician (Automotive); Lift Truck Workshop Controller ; Light Vehicle Diagnostic Technician (Automotive); Light Vehicle Fleet/Service Manager (Automotive); Light Vehicle Master Technician (Automotive); Light Vehicle Service Technician (Automotive); Maintenance and Repair Technicians; Maintenance Team Technician; Maintenance Fitter; Mechanical Fitter; Mechanical Maintenance Technician; Mechanical Supervisor; Mechanical, Electrical and Trim Assistant Technician (Automotive); Mechanical, Electrical and Trim Technician (Automotive); Motor Repair and Rewind Electrician; Motor Vehicle Valeting (Automotive); Motorcycle Diagnostic Technician; Motorcycle Fleet/Service Manager (Automotive); Motorcycle Master Technician (Automotive); Motorcycle Service Technician; Motorsport Technician; PDR Senior Technician (Automotive); PDR Technician (Automotive); Rental and Leasing Customer Service Advisor (Automotive); Rental and Leasing Maintenance Advisors (Automotive); Rental and Leasing Technical Service Advisor (Automotive); Roadside Assistance Manager; Roadside Assistance Operator; Roadside Assistance Operators; Roadside Assistance Senior Operator; Roadside Assistance Senior Technician; Roadside Assistance Technician; Sales Executive (Automotive); Sales Controller (Automotive); Tyre Fitting Operations (Automotive); Tyre exhaust and windscreen fitters ; Vehicle Damage Assessment Operators; Vehicle Damage Assessor (Automotive); Vehicle Fitters; Vehicle Fitting Operations (Automotive); Vehicle Parts Operative; Vehicle Parts Operators; Vehicle Parts Supervisor; Vehicle Recovery Operator; Vehicle Recovery Operators; Vehicle Recovery Technical Operator; Vehicle Sales Operators; Vehicle Trades; Vehicle Valeter (Automotive)
Suite	Accident Repair - Body; Accident Repair - Joining; Accident Repair - Paint; Accident Repair - SMART - Cosmetic; Accident Repair - SMART - PDR; Accident Repair - Mechanical, Electrical and Trim; Body Building; Maintenance and Repair - Caravans and Motorhomes; Maintenance and Repair - Heavy Vehicle; Maintenance and Repair - Heavy Vehicle Trailer; Maintenance and Repair - Lift Truck; Maintenance and Repair - Light Vehicle; Maintenance and Repair - Motorcycle; Auto Electrical and Mobile Electrical Installation; Roadside Assistance; Vehicle Damage Assessment Operations; Vehicle Fitting; Vehicle Parts Operations; Vehicle Recovery; Vehicle Sales v3
Keywords	Contribute, Housekeeping, Motor Vehicle Environments

IMICA02

Reduce Risk(s) to Health and Safety in the Motor Vehicle Environment

Overview

This NOS covers the basic, legally required health and safety duties of everyone in the workplace. This NOS does **not** require a full Risk Assessment to be undertaken. This NOS is about identifying hazards and evaluating risk(s) in the workplace as well as reducing the risk(s) to health and safety in the workplace. This NOS is about having an appreciation of identifiable risk(s) in the workplace and knowing how to identify them and deal with them.

It describes the competence required to ensure that:

- actions or lack of action do not create any health and safety risk(s)
- identifiable risk(s) in the workplace are not ignored
- sensible action is taken to put things right, including reporting situations which pose an identifiable risk(s) to people in the workplace, and seeking advice from others

Performance criteria

You must be able to:

1. carry out your working practices in accordance with relevant legislative requirements
2. identify the correct personal and vehicle protective equipment required to correctly carry out your workplace practices
3. carry out your workplace practices and workplace policies using the correct personal protective equipment
4. rectify health and safety risk(s) that are within your capability and scope of your job responsibilities
5. pass on any suggestions for reducing risk(s) to health and safety within your job role to the responsible persons
6. ensure your personal conduct in the workplace does not endanger the health and safety of yourself or other persons
7. follow the workplace policies and suppliers' or manufacturers' instructions for the safe use of equipment, materials and products and report any differences identified
8. ensure your personal presentation at work ensures the health and safety of yourself and others, meets any relevant legislative duties and is in accordance with workplace policies

Knowledge and understanding

You need to know and understand:

1. the current health and safety legislation, regulations and workplace policies that govern your working practices
2. your duties and responsibilities for current health and safety as defined by any specific legislation covering your job role and where to access the information
3. agreed workplace policies relating to controlling risk(s) to health and safety the responsible person(s) to whom you report health and safety concerns
4. what hazards may exist in your workplace
5. health and safety risk(s) which may be present in your own job role and the precautions you must take
6. the importance of remaining alert to the presence of hazards in the whole workplace
7. how to deal with and report risk(s)
8. the requirements and guidance on the precautions
9. the specific workplace policies including safe working practices covering your job role
10. suppliers' and manufacturers' instructions for the safe use of equipment, materials and products
11. the importance of personal presentation in maintaining health and safety in the workplace
12. the importance of personal conduct in maintaining the health and safety of yourself and others
13. the importance of personal protective equipment, when and where it should be used and the importance of maintaining it correctly
14. your scope and responsibility for rectifying risk(s)

Scope/range

1. Risk(s) resulting from:

a. use of tools and equipment relevant to the task
b. the use of materials or substances
c. working practices which do not conform to laid down policies
d. unsafe behaviour
e. accidental breakages and spillages
f. environmental factors
g. working at height
h. lifting operations and manual handling
i. incorrect use of personal protective equipment

2. Workplace policies covering:

a. the use of safe working methods and equipment
b. the safe use of hazardous substances
c. smoking, eating, drinking and drugs
d. what to do in the event of an emergency
e. personal presentation
f. personal protective equipment
g. lifting operations and manual handling
h. working at height
i. mobile phones and personal stereo equipment

3. Motor Vehicle could include:

a. Light Vehicles
b. Heavy Vehicles/Commercial Vehicles
c. Motorcycles
d. Lift Trucks
e. Heavy Vehicle Trailers
f. Caravan and Motorhomes

IMICA02

Reduce Risk(s) to Health and Safety in the Motor Vehicle Environment

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Status	Original
Originating Organisation	IMI
Original URN	IMIARB2
Relevant Occupations	Auto-electrical Technician (Automotive); Auto and Mobile Installation Technicians; Automotive Aftermarket Electrical Enhancement Technician (Automotive); Automotive Paint Supervisor; Automotive Paint Technician; Body Builder (Automotive); Body Builder Workshop Controller (Automotive); Body Repair and Alignment Technician (Automotive); Body Repair Technician (Automotive); Caravan and Motorhome Diagnostic Technician (Automotive); Caravan and Motorhome Service Technician (Automotive); Caravans and Motorhomes Diagnostic Technician (Automotive); Caravans and Motorhomes Service Technician (Automotive); Heavy Vehicle Diagnostic Technician (Automotive); Heavy Vehicle Fleet/Service Manager (Automotive); Heavy Vehicle Master Technician (Automotive); Heavy Vehicle Service Technician (Automotive); Heavy Vehicle Trailer Diagnostic Technician (Automotive); Heavy Vehicle Trailer Fleet/Service Manager (Automotive); Heavy Vehicle Trailer Master Technician (Automotive); Heavy Vehicle Trailer Service Technician (Automotive); Lift Truck Service Technician (Automotive); Lift Truck Trailer Diagnostic Technician (Automotive); Lift Truck Trailer Master Technician (Automotive); Lift Truck Workshop Controller ; Light Vehicle Diagnostic

	Technician (Automotive); Light Vehicle Fleet/Service Manager (Automotive); Light Vehicle Master Technician (Automotive); Light Vehicle Service Technician (Automotive); Maintenance and Repair Technicians; Maintenance Fitter; Maintenance Team Technician; Mechanical, Electrical and Trim Technician (Automotive); Mechanical, Electrical and Trim Assistant Technician (Automotive); Motorcycle Diagnostic Technician; Motor Vehicle Valeting (Automotive); Motorcycle Fleet/Service Manager (Automotive); Motorcycle Master Technician (Automotive); Motorcycle Service Technician; Motorsport Technician; PDR Senior Technician (Automotive); PDR Technician (Automotive); Rental and Leasing Customer Service Advisor (Automotive); Rental and Leasing Maintenance Advisors (Automotive); Rental and Leasing Technical Service Advisor (Automotive); Roadside Assistance Manager; Roadside Assistance Operator; Roadside Assistance Operators; Roadside Assistance Senior Operator; Roadside Assistance Senior Technician; Roadside Assistance Technician; Sales Controller (Automotive); Sales Executive (Automotive); Senior Automotive Paint Technician; Tyre Fitting Operations (Automotive); Tyre exhaust and windscreen fitters ; Vehicle Damage Assessment Operators; Vehicle Damage Assessor (Automotive); Vehicle Fitters; Vehicle Fitting Operations (Automotive); Vehicle Parts Operative; Vehicle Parts Operators; Vehicle Parts Supervisor; Vehicle Recovery Operator; Vehicle Recovery Operators; Vehicle Recovery Technical Operator; Vehicle Sales Operators; Vehicle Trades; Vehicle Valeter (Automotive)
Suite	Accident Repair - Body; Accident Repair - Joining; Accident Repair - Mechanical, Electrical and Trim; Accident Repair - Paint; Accident Repair - SMART - Cosmetic; Accident Repair - SMART - PDR; Auto Electrical and Mobile Electrical Installation; Body Building; Maintenance and Repair - Caravans and Motorhomes; Maintenance and Repair - Heavy Vehicle; Maintenance and Repair - Heavy Vehicle Trailer; Maintenance and Repair - Lift Truck; Maintenance and Repair - Light Vehicle; Maintenance and Repair - Motorcycle; Vehicle Damage Assessment Operations; Vehicle Fitting; Vehicle Parts Operations; Vehicle Recovery; Vehicle Sales v3
Keywords	Identify, Agree, Motor Vehicle, Customer Needs

IMICA03

Maintain Working Relationships in the Motor Vehicle Environment

Overview

This NOS is about maintaining good working relationships with all colleagues in the working environment by using effective communication and support skills.

Performance criteria

You must be able to:

1. contribute to team working by initiating ideas and co-operating with colleagues
2. respond promptly and willingly to requests for assistance from colleagues which fall within the limits of your own job responsibilities and capabilities
3. refer colleagues to the relevant person(s) where requests fall outside your responsibility and capability
4. give colleagues sufficient, accurate information and support to meet their work needs
5. make requests for assistance to colleagues clearly and courteously
6. use methods of communication which meet the needs of colleagues
7. treat colleagues in a way which shows respect for their views and opinions and promotes goodwill
8. make and keep achievable commitments to colleagues
9. inform colleagues promptly of any problems or information likely to affect their own work

Knowledge and understanding

You need to know and understand:

1. your own and your colleague's job role and limits of responsibility for giving advice and support
2. the operational constraints which may affect interaction with colleagues
3. lines of communication within your workplace
4. how to use suitable and effective communication skills when responding to and interacting with others
5. how to adapt communication methods to satisfy the needs of colleagues
6. how to report problems using appropriate methods of communication
7. the importance of developing positive working relationships with colleagues – the effect on morale, productivity, and company image
8. the importance of acknowledging other peoples' views and opinions
9. the importance of making and honouring realistic commitments to colleagues
10. the implications of inappropriate communication

Scope/range

1. Colleagues are:

a. immediate work colleagues
b. supervisors and managers

2. Requests for assistance covering:

a. technical assistance
b. personal assistance

3. Motor Vehicle could include:

a. Light Vehicles
b. Heavy Vehicles/Commercial Vehicles
c. Motorcycles
d. Lift Trucks
e. Heavy Vehicle Trailers
f. Caravan and Motorhomes

Developed by	IMI
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Status	Original
Originating Organisation	IMI
Original URN	IMIARB3
Relevant Occupations	Accident Repair Technicians; Automotive Aftermarket Electrical Enhancement Technician (Automotive); Auto and Mobile Installation Technicians; Auto-electrical Technician (Automotive); Automotive Paint Supervisor; Automotive Paint Technician; Body Builder (Automotive); Body Builder Workshop Controller (Automotive); Body Repair and Alignment Technician (Automotive); Body Repair Technician (Automotive); Caravan and Motorhome Diagnostic Technician (Automotive); Caravan and Motorhome Service Technician (Automotive); Caravans and Motorhomes Diagnostic Technician (Automotive); Caravans and Motorhomes Service Technician (Automotive); Cosmetic Senior Refinishing Technician (Automotive); Cosmetic Refinishing Technician (Automotive); Heavy Vehicle Diagnostic Technician (Automotive); Heavy Vehicle Fleet/Service Manager (Automotive); Heavy Vehicle Master Technician (Automotive); Heavy Vehicle Service Technician (Automotive); Heavy Vehicle Trailer Diagnostic Technician (Automotive); Heavy Vehicle Trailer Fleet/Service Manager (Automotive); Heavy Vehicle Trailer Master Technician (Automotive); Heavy Vehicle Trailer Service Technician (Automotive); Lift Truck Service Technician (Automotive); Lift Truck Trailer Diagnostic Technician (Automotive);

	Lift Truck Trailer Master Technician (Automotive); Lift Truck Workshop Controller ; Light Vehicle Diagnostic Technician (Automotive); Light Vehicle Fleet/Service Manager (Automotive); Light Vehicle Master Technician (Automotive); Light Vehicle Service Technician (Automotive); Maintenance and Repair Technicians; Mechanical, Electrical and Trim Technician (Automotive); Mechanical, Electrical and Trim Assistant Technician (Automotive); Motor Repair and Rewind Electrician; Motor Vehicle Valeting (Automotive); Motorcycle Diagnostic Technician; Motorcycle Fleet/Service Manager (Automotive); Motorcycle Master Technician (Automotive); Motorcycle Service Technician; Motorsport Technician; PDR Senior Technician (Automotive); PDR Technician (Automotive); Rental and Leasing Customer Service Advisor (Automotive); Rental and Leasing Maintenance Advisors (Automotive); Rental and Leasing Technical Service Advisor (Automotive); Roadside Assistance Manager; Roadside Assistance Operator; Roadside Assistance Operators; Roadside Assistance Senior Operator; Roadside Assistance Senior Technician; Roadside Assistance Technician; Sales Executive (Automotive); Sales Controller (Automotive); Tyre exhaust and windscreen fitters ; Tyre Fitting Operations (Automotive); Vehicle Damage Assessment Operators; Vehicle Damage Assessor (Automotive); Vehicle Fitters; Vehicle Fitting Operations (Automotive); Vehicle Parts Operative; Vehicle Parts Operators; Vehicle Parts Supervisor; Vehicle Recovery Operators; Vehicle Recovery Operator; Vehicle Recovery Technical Operator; Vehicle Valeter (Automotive)
Suite	2010 Incremental change to the NOS in Interpreting; Accident Repair - Body; Accident Repair - Joining; Accident Repair - Mechanical, Electrical and Trim; Accident Repair - Paint; Accident Repair - SMART - Cosmetic; Accident Repair - SMART - PDR; Auto Electrical and Mobile Electrical Installation; Automotive Glazing; Maintenance and Repair - Caravans and Motorhomes; Maintenance and Repair - Heavy Vehicle; Maintenance and Repair - Heavy Vehicle Trailer; Maintenance and Repair - Lift Truck; Maintenance and Repair - Light Vehicle; Maintenance and Repair - Motorcycle; Roadside Assistance; Vehicle Damage Assessment Operations; Vehicle Fitting; Vehicle Sales v3; Vehicle Recovery; Vehicle Parts Operations
Keywords	Maintain Working Relationships, Motor Vehicle Environment

IMICA04

Use of tools and equipment in Motor Vehicle Environments

Overview

This NOS is about the basic use of tools, materials and fabrications relevant to the Automotive Sector. This NOS is also about interpreting information, adopting safe and healthy working practices and selecting tools, materials and equipment. This NOS is for those working in technical support roles and is also appropriate for workshop planners.

Performance criteria

You must be able to:

1. select and use suitable personal protective equipment appropriate to the task
2. interpret the information supplied relating to the task
3. carry out pre-start preparation inspections on tools and equipment in accordance with approved procedures
4. carry out operations using tools and equipment in accordance with safe working practices to achieve the work outcome
5. highlight and identify problems associated with tools and equipment to the relevant person
6. demonstrate work skills to manufacture and repair components using measure, mark out, file, fit, tap, thread, cut, drill, finish, position and secure
7. use and maintain the relevant tools and equipment
8. dispose of waste in accordance with relevant legislation including environmental to maintain a clean work space
9. carry out checks in accordance with manufacturer's/operator's guidance, schedules, relevant legislation and official guidance and relevant organisational requirements.
10. demonstrate correct selection of materials for manufacture or repair
11. inspect, clean and store tools and equipment after use

Knowledge and understanding

You need to know and understand:

1. the relevant organisational procedures developed to report and rectify inappropriate information and unsuitable resources, and how they are implemented
2. the types of information, their source and how they are interpreted
3. the relevant organisational procedures to solve problems with the information and why it is important they are followed
4. the relevant legislation and official guidance and how it is applied
5. what the accident reporting procedures are and who is responsible for making the reports
6. why and when personal protective equipment (PPE) should be used
7. the relevant requirements for the disposal of waste, used materials and debris taking into account relevant environmental factors
8. material properties relevant to the task and their appropriate applications
9. the appropriate use of materials for fabrication and repair
10. how to file, fit, tap, thread, cut and drill mterials you are working on
11. how to select and use gaskets, sealants, seals, fittings and fasteners

Scope/range

1. Tools and equipment are:

a. hand tools
b. electrical
c. mechanical
d. pneumatic
e. hydraulic

2. Motor Vehicle could include:

a. Light Vehicles
b. Heavy Vehicles/Commercial Vehicles
c. Motorcycles
d. Lift Trucks
e. Heavy Vehicle Trailers
f. Caravan and Motorhomes

IMICA04

Use of tools and equipment in Motor Vehicle Environments

Developed by	IMI
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Date Approved	October 2014
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Validity	Current
Status	Original
Originating Organisation	IMIARB4
Original URN	IMIARB4
Relevant Occupations	Automotive Aftermarket Electrical Enhancement Technician (Automotive); Auto-electrical Technician (Automotive); Body Builder (Automotive); Body Builder Workshop Controller (Automotive); Body Repair and Alignment Technician (Automotive); Body Repair Technician (Automotive); Caravan and Motorhome Diagnostic Technician (Automotive); Caravan and Motorhome Service Technician (Automotive); Caravans and Motorhomes Diagnostic Technician (Automotive); Caravans and Motorhomes Service Technician (Automotive); Cosmetic Refinishing Technician (Automotive); Cosmetic Senior Refinishing Technician (Automotive); Heavy Vehicle Diagnostic Technician (Automotive); Heavy Vehicle Fleet/Service Manager (Automotive); Heavy Vehicle Master Technician (Automotive); Heavy Vehicle Service Technician (Automotive); Heavy Vehicle Trailer Diagnostic Technician (Automotive); Heavy Vehicle Trailer Fleet/Service Manager (Automotive); Heavy Vehicle Trailer Master Technician (Automotive); Heavy Vehicle Trailer Service Technician (Automotive); Lift Truck Service Technician (Automotive); Lift Truck Trailer Diagnostic Technician (Automotive); Lift Truck Trailer Master Technician (Automotive); Lift Truck Workshop Controller ; Light Vehicle Diagnostic

	Technician (Automotive); Light Vehicle Fleet/Service Manager (Automotive); Light Vehicle Master Technician (Automotive); Light Vehicle Service Technician (Automotive); Maintenance and Repair Technicians; Maintenance Electrician; Mechanical, Electrical and Trim Assistant Technician (Automotive); Mechanical, Electrical and Trim Technician (Automotive); Motor Repair and Rewind Electrician; Motorcycle Diagnostic Technician; Motorcycle Master Technician (Automotive); Motorcycle Service Technician; PDR Technician (Automotive); PDR Senior Technician (Automotive); Roadside Assistance Operator; Roadside Assistance Operators; Roadside Assistance Senior Operator; Roadside Assistance Senior Technician; Roadside Assistance Technician; Tyre Fitting Operations (Automotive); Tyre exhaust and windscreen fitters ; Vehicle Fitters; Vehicle Fitting Operations (Automotive); Vehicle Recovery Operator; Vehicle Recovery Operators; Vehicle Recovery Technical Operator
Suite	Accident Repair - Body; Accident Repair - Joining; Accident Repair - Mechanical, Electrical and Trim; Accident Repair - SMART - Cosmetic; Accident Repair - SMART - PDR; Auto Electrical and Mobile Electrical Installation; Body Building; Maintenance and Repair - Heavy Vehicle; Maintenance and Repair - Heavy Vehicle Trailer; Maintenance and Repair - Lift Truck; Maintenance and Repair - Light Vehicle; Maintenance and Repair - Motorcycle; Maintenance and Repair - Caravans and Motorhomes; Maintenance and Repair - Motorcycle; Vehicle Recovery; Vehicle Fitting
Keywords	Tools, Equipment, Motor Vehicle Engineering

IMIARBG6
Enable learning through demonstration and instruction

Overview

This NOS is about demonstrating skills and methods to learners and instructing learners in procedures and processes.

These include; demonstrating how equipment is used, showing a learner how to do something, giving learners instructions on what to do or how to carry out a particular activity, deciding when you should use demonstration or instruction to encourage learning, reviewing the potential use of technology- based learning, checking on the progress of learners and giving feedback to learners.

IMIARBG6

Enable learning through demonstration and instruction

Performance criteria

You must be able to:

Demonstrate skills and methods to learners

P1 base the demonstration on an analysis of the skills needed and the order they must be learned in

P2 ensure that the demonstration is accurate and realistic

P3 structure the demonstration so the learner can get the most out of it

P4 encourage learners to ask questions and get explanation at appropriate stages in the demonstration

P5 give learners the opportunities to practise the skill being demonstrated and give them positive feedback

P6 give extra demonstrations of the skills being taught to reinforce learning

P7 ensure that demonstrations take place in a safe environment and allow learners to see the demonstration clearly

P8 respond to the needs of learners during the demonstration

P9 reduce distractions and disruptions as much as possible

You must be able to:

Instruct learners

P10 match instruction to the needs of the learners

P11 identify which learning outcomes will be achieved through instruction

P12 ensure that the manner, level and speed of the instruction encourages learners to take part

P13 regularly check that learners understand and adapt instruction as appropriate

P14 give learners positive feedback on the learning experience and the outcomes achieved

P15 identify anything that prevents learning and review this with the learners

IMIARBG6

Enable learning through demonstration and instruction

Knowledge and understanding

You need to know and understand:

The nature and role of demonstrations and instruction

K1 the separate areas of demonstrations which encourage learning
K2 which types of learning are best achieved and supported through demonstrations
K3 how to identify and use different learning opportunities
K4 how to structure demonstrations and instruction sessions
K5 how to choose from a range of demonstration techniques

You need to know and understand:

Principles and concepts

K6 how to put learners at their ease and encourage them to take part
K7 how to choose between demonstration and instruction as learning methods
K8 how to identify individual learning needs
K9 which factors are likely to prevent learning and how to overcome them
K10 how to check learners' understanding and progress
K11 how to put information in order and decide whether the language you will be using is appropriate
K12 how to choose and prepare appropriate materials, including technology based materials
K13 the separate areas of instructional techniques which encourage learning
K14 which types of learning are best achieved and supported through instruction

You need to know and understand:

External factors influencing human resource development

K15 how to make sure everybody acts in line with health, safety and environmental protection l legislation and best practice
K16 how to analyse and use developments in learning and new ways of delivery, including technology-based learning

IMIARBG6

Enable learning through demonstration and instruction

Developed by	IMI Ltd
Version number	1
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Indicative review date	January 2012
Validity	Current
Status	Original
Originating organisation	IMI Ltd
Original URN	G6
Relevant occupations	Maintenance and Repair Technicians; Accident Repair Technicians; Auto and Mobile Installation Technicians; Roadside Assistance Operators; Vehicle Recovery Operators; Vehicle Damage Assessment Operators; Vehicle Parts Operators; Vehicle Sales Operators
Suite	Maintenance and Repair – Light Vehicle; Heavy Vehicle, Heavy Vehicle Trailer; Motorcycle; Lift Truck; Caravans and Motorhomes; Accident Repair – Body; Paint; Joining; Mechanical, Electrical & Trim (MET); SMART Cosmetic; SMART Paintless Dent Removal (PDR); Auto electrical and Mobile Electrical Installation; Body Building; Roadside Assistance; Vehicle Recovery; Vehicle Damage Assessors; Vehicle Fitting; Vehicle Parts; Vehicle Sales
Key words	[KEYWORDS]

IMICA08

Identify and Agree the Motor Vehicle Customer Needs

Overview

This NOS is about gaining information from customers on their perceived needs; giving advice and information and agreeing a course of action; contracting for the agreed work and completing all necessary records and instructions.

Performance criteria

You must be able to:

1. obtain the relevant information from the customer to make an assessment of their own and perceived vehicle needs
2. provide customers with accurate, current and relevant advice and information on suitable vehicle inspection, repair and/or service procedures, potential courses of action, the implications of courses of action and the estimated costs
3. provide advice and information clearly and in a form and manner which the customer will understand
4. actively encourage customers to ask questions and seek clarification during your conversation.
5. support the accurate identification and clarification of customer and vehicle needs, by referring to vehicle data and operating procedures
6. agree with the customer before accepting the vehicle and record the extent and nature of the work to be undertaken, the terms and conditions of acceptance, the cost and the timescale
7. confirm your customer's understanding of the agreement you have made
8. ensure your recording systems are complete, accurate, in the format required and signed by the customer where necessary
9. pass all completed records to the next person in the process promptly
10. gain further customer approval where the contracted agreement is likely to be exceeded

Knowledge and understanding

You need to know and understand:

1. the relevant legal requirements of consumer legislation and the consequences of your own actions in respect of these
2. the different types of company and product warranties that you deal with within your organisation
3. the limits of your own responsibility for accepting and returning vehicles
4. the importance of keeping customers informed and managing their expectations
5. your workplace requirements for the completion of records and documentation
6. how to communicate effectively with, and listen to, customers
7. how to adapt your language when explaining technical matters to non-technical customers
8. how to extract the relevant information to identify and agree the motor vehicle customer needs
9. how to care for customers and achieve customer satisfaction
10. the range of options available to meet customer needs
11. the range and type of services offered by your organisation
12. the effect of non-availability of resource upon the receipt of customer vehicles and for the completion of the work
13. where and how to access costing and work completion time information

Scope/range

1. Motor Vehicle could include:

a. Light Vehicles
b. Heavy Vehicles/Commercial Vehicles
c. Motorcycles
d. Lift Trucks
e. Heavy Vehicle Trailers
f. Caravan and Motorhomes

IMICA08

Identify and Agree the Motor Vehicle Customer Needs

Developed by	IMI
Version Number	2
Date Approved	October 2014
Indicative Review Date	October 2017
Validity	Current
Status	Original
Originating Organisation	IMI
Original URN	IMIARB8
Relevant Occupations	Body Builder (Automotive); Body Builder Workshop Controller (Automotive); Body Repair and Alignment Technician (Automotive); Body Repair Technician (Automotive); Caravan and Motorhome Diagnostic Technician (Automotive); Caravan and Motorhome Service Technician (Automotive); Caravans and Motorhomes Diagnostic Technician (Automotive); Caravans and Motorhomes Service Technician (Automotive); Cosmetic Senior Refinishing Technician (Automotive); Cosmetic Refinishing Technician (Automotive); Heavy Vehicle Diagnostic Technician (Automotive); Heavy Vehicle Fleet/Service Manager (Automotive); Heavy Vehicle Master Technician (Automotive); Heavy Vehicle Service Technician (Automotive); Heavy Vehicle Trailer Diagnostic Technician (Automotive); Heavy Vehicle Trailer Fleet/Service Manager (Automotive); Heavy Vehicle Trailer Master Technician (Automotive); Heavy Vehicle Trailer Service Technician (Automotive); Lift Truck Service Technician (Automotive); Lift Truck Trailer Diagnostic Technician (Automotive); Lift Truck Trailer Master Technician (Automotive); Lift Truck Workshop Controller ; Light Vehicle Diagnostic Technician (Automotive); Light Vehicle Fleet/Service Manager (Automotive); Light Vehicle Master Technician (Automotive); Light Vehicle

	Service Technician (Automotive); Maintenance and Repair Technicians; Mechanical, Electrical and Trim Assistant Technician (Automotive); Mechanical, Electrical and Trim Technician (Automotive); Motorcycle Diagnostic Technician; Motorcycle Fleet/Service Manager (Automotive); Motorcycle Master Technician (Automotive); Motorcycle Service Technician; PDR Senior Technician (Automotive); PDR Technician (Automotive); Roadside Assistance Manager; Roadside Assistance Operator; Roadside Assistance Operators; Roadside Assistance Senior Operator; Roadside Assistance Senior Technician; Roadside Assistance Technician
Suite	Accident Repair - Body; Accident Repair - Joining; Accident Repair - Mechanical, Electrical and Trim; Accident Repair - SMART - Cosmetic; Accident Repair - SMART - PDR; Auto Electrical and Mobile Electrical Installation; Body Building; Maintenance and Repair - Caravans and Motorhomes; Maintenance and Repair - Heavy Vehicle; Maintenance and Repair - Heavy Vehicle Trailer; Maintenance and Repair - Lift Truck; Maintenance and Repair - Light Vehicle; Maintenance and Repair - Motorcycle; Roadside Assistance; Vehicle Fitting; Vehicle Recovery
Keywords	Reduce Risk(s), Health and Safety, Motor Vehicle Environment

IMIARBG11
Supervisory skills

Overview

This NOS is about ensuring that the work required in your area of responsibility is effectively planned and fairly allocated to individuals and/or teams. It also involves monitoring the progress and quality of the work of individuals and/or teams to ensure that the required level or standard of performance is being met and reviewing and updating plans of work in the light of developments.

The ‘area of responsibility’ may be, for example, a branch or department or functional area or an operating site within an organisation.

The NOS is recommended for first line managers and middle managers.

IMIARBG11
Supervisory skills

Performance criteria

You must be able to:

P1 confirm the work required in your area of responsibility with your manager and seek clarification, where necessary, on any outstanding points and issues

P2 plan how the work will be undertaken, seeking views from people in your area of responsibility, identifying any priorities or critical activities and making best use of the available resources

P3 ensure that work is allocated to individuals and/or teams on a fair basis taking account of skills, knowledge and understanding, experience and workloads and the opportunities for development

P4 ensure that individuals and/or teams are briefed on allocated work, showing how it fits with the vision and objectives for the area and the overall organisation, and the standard or level of expected performance

P5 recognise and seek to find out about differences in expectations and working methods of any team members from a different country or culture and promote ways of working that take account of their expectations and maximise productivity

P6 encourage individuals and/or team members to ask questions, make suggestions and seek clarification in relation to allocated work

P7 monitor the progress and quality of the work of individuals and/or teams on a regular and fair basis against the standard or level of expected performance and provide prompt and constructive feedback

P8 support individuals and/or teams in identifying and dealing with problems and unforeseen events

P9 motivate individual and/or teams to complete the work they have been allocated and provide, where requested and where possible, any additional support and/or resources to help completion

P10 monitor your area for conflict, identifying the cause(s) when it occurs and dealing with it promptly and effectively

P11 identify unacceptable or poor performance, discuss the cause(s) and agree ways of improving performance with individuals and/or teams

P12 recognise successful completion of significant pieces of work or work activities by individuals and/or teams

P13 use information collected on the performance of individuals and/or teams in any formal appraisals of performance

P14 review and update plans of work for your area, clearly communicating any changes to those affected

IMIARBG11
Supervisory skills

Knowledge and understanding

You need to know and understand:

K1 how to select and successfully apply different methods for communicating with people across an area of responsibility

K2 the importance of confirming/clarifying the work required in your area of responsibility with your manager and how to do this effectively

K3 how to identify and take due account of health and safety issues in the planning, allocation and monitoring of work

K4 how to produce a plan of work for your area of responsibility, including how to identify any priorities or critical activities and the available resources

K5 how to identify sustainable resources and ensure their effective use when planning the work for your area of responsibility

K6 the importance of seeking views from people working in your area and how to take account of their views in producing the plan of work

K7 the values, ethics, beliefs, faith, cultural conventions, perceptions and expectations of any team members from a different country or culture and how your own values, ethics, beliefs, faith, cultural conventions, perceptions, expectations, use of language, tone of voice and body language may appear to them

K8 why it is important to allocate work to individuals and/or teams on a fair basis and how to do so effectively

K9 why it is important that individuals and/or teams are briefed on allocated work and the standard or level of expected performance and how to do so effectively

K10 the importance of showing individuals and/or teams how their work fits with the vision and objectives of the area and those of the organisation

K11 ways of encouraging individuals and/or teams to ask questions and/or seek clarification in relation to the work which they have been allocated

K12 effective ways of regularly and fairly monitoring the progress and quality of work of individuals and/or teams against the standards or level of expected performance

K13 how to provide prompt and constructive feedback to individuals and/or teams

K14 why it is important to monitor your area for conflict and how to identify the cause(s) of conflict when it occurs and deal with it promptly and effectively how to take account of diversity and inclusion issues when supporting and encouraging individuals and/or teams to complete the work they have been allocated

K15 why it is important to identify unacceptable or poor performance by individuals and/or teams and how to discuss the cause(s) and agree ways of improving performance with them

K16 the type of problems and unforeseen events that may occur and how to

support individuals and/or teams in dealing with them

K17 the additional support and/or resources which individuals and/or teams might require to help them complete their work and how to assist in providing this

K18 how to select and successfully apply different methods for encouraging, motivating and supporting individuals and/or teams to complete the work they have been allocated, improve their performance and for recognising their achievements

K19 how to log information on the ongoing performance of individuals and/or teams and use this information for formal performance appraisal purposes

Industry/sector specific knowledge and understanding

K20 industry/sector requirements for the development or maintenance of knowledge, understanding and skills

K21 industry/sector specific legislation, regulations, guidelines, codes of practice relating to carrying out work

IMIARBG11
Supervisory skills

Additional Information

Skills

Listed below are the main generic ‘skills’ which need to be applied in allocating and monitoring the progress and quality of work in your area of responsibility. These skills are explicit/implicit in the detailed content of the NOS and are listed here as additional information.

1. Communicating
2. Consulting
3. Decision making
4. Delegating
5. Information management
6. Leadership
7. Managing conflict
8. Monitoring
9. Motivating
10. Planning
11. Problem solving
12. Providing feedback
13. Prioritising
14. Reviewing
15. Setting objectives
16. Stress management
17. Valuing and supporting others.

IMIARBG11
Supervisory skills

Developed by	IMI Ltd
Version number	1
Date approved	January 2010
Indicative review date	January 2012
Validity	Current
Status	Tailored
Originating organisation	IMI Ltd
Original URN	(MSC D6)
Relevant occupations	Engineering; Vehicle Trades
Suite	Accident Repair - Body
Key words	supervisory skills

IMIARBBP01

Remove and Fit Mechanical, Electrical and Trim (MET) Components to Vehicles

Overview

This standard is about the straightforward removal and fitting of mechanical, Mechanical, Electrical and Trim (MET) components to vehicles. It is also about checking the operation of the components fitted.

Performance criteria

You must be able to:

1. use the appropriate Personal Protective Equipment (PPE) when removing and fitting Mechanical, Electrical and Trim (MET) components
2. protect the vehicle and its contents effectively when removing and fitting Mechanical, Electrical and Trim (MET) components
3. select and use the correct tools and equipment for the components you are going to remove or fit
4. ensure that the tools and equipment you require are in a safe working condition
5. remove and fit Mechanical, Electrical and Trim (MET) components following removal and fitting procedures, manufacturers' instructions, your workplace procedures as well as health, safety and legal requirements
6. avoid damaging other components and standards on the vehicle
7. store all removed components safely in the correct location and ensure no further damage occurs
8. check that the components you have fitted operate correctly following the manufacturer's specification
9. report any additional faults or further damage you find during the course of your work to the relevant person(s) promptly
10. report any delays in completing your work to the relevant person(s) promptly
11. remove and fit Mechanical, Electrical and Trim (MET) components within the agreed timescale
12. complete work records accurately, in the format required and pass them to the relevant person(s) promptly

Knowledge and understanding

You need to know and understand:

1. the health, safety and legal requirements relating to the removal and fitting of Mechanical, Electrical and Trim (MET) components
2. the safety aspects relating to removing/replacing/storing pyrotechnic devices such as air bags, seat belt tensioners, head restraints and the bonnet pedestrian protection systems
3. your workplace procedures for the referral of problems, reporting of delays to the completion of work and completion of work records
4. the work that needs to be done and the standard required
5. the requirements for protecting the vehicle and contents from damage before, during and after removing and fitting activities
6. the importance of selecting, using and maintaining the appropriate Personal Protective Equipment (PPE) when removing and fitting Mechanical, Electrical and Trim (MET) components
7. how to find, interpret and use sources of information applicable to the removal and fitting of Mechanical, Electrical and Trim (MET) components
8. how to select, check and use all the tools and equipment required to remove and fit Mechanical, Electrical and Trim (MET) components
9. the procedures for removing and fitting Mechanical, Electrical and Trim (MET) components
10. the methods of storing removed parts and the importance of storing them correctly
11. the different types of fastenings and the reasons for their use
12. the need for correct alignment of components and the methods used to achieve this
13. the types of quality checks that can be used to ensure correct alignment and operation of components to manufacturer's specification and their purpose

Scope/range

All of the items listed below form part of this National Occupational Standard.

Range:

1. Mechanical, Electrical and Trim (MET) components are:

a) bumpers
b) interior/exterior lighting components
c) road wheels
d) batteries
e) bonnet and boot lid trim
f) interior trim components
g) exterior trim components
h) accessories
i) driver aids
j) Occupancy safety systems

2. Tools and equipment are:

a) generic hand tools
b) manufacturer's specified and specialist tools
c) workshop equipment

IMIARBBP01

Remove and Fit Mechanical, Electrical and Trim (MET) Components to Vehicles

Developed by	IMI
Version Number	2
Date Approved	December 2014
Indicative Review Date	December 2017
Validity	Current
Status	Original
Originating Organisation	IMI
Original URN	IMIARBBP01
Relevant Occupations	Accident Repair Technicians; Body Repair and Alignment Technician (Automotive); Body Repair Technician (Automotive)
Suite	Accident Repair - Body
Keywords	Remove Fit Mechanical Electrical Trim (MET) Components Vehicles

IMIARBBP02

Remove and Fit Non Permanently Fixed Motor Vehicle Body Panels

Overview

This standard is about removing and fitting non permanently fixed panels such as wings, doors, bonnets, boot lids, painted sun roof panels, hardtop panel sections and tailgates on vehicles. These panels contain safety related components.

Performance criteria

You must be able to:

1. use the appropriate Personal Protective Equipment (PPE) when removing and fitting non permanently fixed body panels
2. protect the vehicle, its contents and systems effectively when removing and fitting non permanently fixed body panels
3. select and use the correct tools and equipment for the components you are going to remove or fit
4. ensure that the tools and equipment you require are in a safe working condition
5. remove and fit non permanently fixed body panels following manufacturers' methods/instructions, recognised researched repair methods, your workplace procedures as well as health, safety and legal requirements
6. avoid damaging other components, standards and panels on the vehicle
7. store all removed components safely in the correct location and in accordance with relevant legislation
8. realign the components you have fitted correctly in a way which regains their original manufactured tolerance
9. check that the components you have fitted operate correctly following the manufacturer's specification
10. report any faults and any further damage you notice during the course of your work to the relevant person(s) promptly
11. report any delays in completing your work to the relevant person(s) promptly
12. complete all activities within the agreed timescale
13. complete work records accurately, in the format required and pass them to the relevant person(s) promptly

Knowledge and understanding

You need to know and understand:

1. the health, safety and legal requirements relating to the removal and fitting of non permanently fixed body panels
2. your workplace procedures for the referral of problems, reporting of delays to the completion of work and completion of work records
3. the work that needs to be done and the standard required
4. the relationship between time, cost and profitability
5. the requirements for protecting the vehicle and contents from damage before, during and after removing and fitting activities
6. the importance of selecting, using and maintaining the appropriate personal protective equipment when removing and fitting non permanently fixed body panels
7. how to find, interpret and use sources of information applicable to the removal and fitting of non permanently fixed body panels
8. how to select, check and use all the tools and equipment required to remove and fit non permanently fixed body panels
9. the different types of mechanical fixings for non permanently fixed body panels and when and why they should be used
10. the correct procedures and processes for removing and fitting non permanently fixed body panels
11. the need for correct alignment of panels and the methods used to achieve this
12. the types of quality control checks that can be used to ensure correct alignment and contour of panels and operation of components to manufacturer's specification
13. the methods of storing removed components and the importance of storing them correctly and in accordance with legal requirements

Scope/range

All of the items listed below form part of this National Occupational Standard.

Range:

1. Panels covered in this standard are:

a) wings
b) doors
c) bonnets
d) boot lids and tailgates
e) bumpers
f) sun roof panels
g) hard top panel sections

2. Tools and equipment are:

a) workshop equipment
b) generic hand tools
c) manufacturer's specified and specialist tools

IMIARBBP02

Remove and Fit Non Permanently Fixed Motor Vehicle Body Panels

Developed by	IMI
Version Number	2
Date Approved	December 2014
Indicative Review Date	December 2017
Validity	Current
Status	Original
Originating Organisation	IMI
Original URN	IMIARBBP02
Relevant Occupations	Accident Repair Technicians; Body Repair and Alignment Technician (Automotive); Body Repair Technician (Automotive)
Suite	Accident Repair - Body
Keywords	Remove Fit Non Permanently Fixed Motor Vehicle Body Panels

IMIARBBP05

Remove, Replace and/or Refit Motor Vehicle Body Panels

Overview

This standard is about removing, replacing and/or refitting body panels using mechanical fastening.

Performance criteria

You must be able to:

1. identify component materials involved in the construction of the vehicle in the areas that will be worked on during repair, prior to working on the vehicle
2. use the appropriate Personal Protective Equipment (PPE) when removing and replacing body panels
3. protect the vehicle, its contents and systems effectively when removing and replacing body panels
4. inspect, prepare and use all the tools and equipment required following manufacturers' instructions
5. remove, replace and/or refit all necessary body panels and components following the manufacturer's methods/instructions, recognised researched repair methods, your workplace procedures, the vehicle work specification as well as health, safety and legal requirements
6. seek assistance from the relevant person(s) promptly where there is the potential for your work to disturb other vehicle systems
7. store all removed components safely in the correct location and in accordance with relevant legislation
8. use replacement body panels and components which conform to the vehicle specifications for dimensions, materials and functional capability
9. use and apply sealants and anti corrosion materials conforming to the manufacturer's specification
10. ensure panels are removed and replaced minimising damage to mating surfaces (any damage caused should be correctly reinstated)
11. ensure panels are replaced without incurring damage to the vehicle systems
12. ensure all refitted body panels and components are aligned correctly with adjacent panels and fittings
13. complete all activities within the agreed timescale
14. report any anticipated delays in completion to the relevant person(s) promptly

Knowledge and understanding

You need to know and understand:

1. the health and safety legislation and workplace procedures relevant to workshop practices and Personal Protective Equipment (PPE)
2. the agreed vehicle work specification
3. the importance of working to agreed timescales and keeping others informed of progress
4. the relationship between time, cost and profitability
5. the requirements for protecting the vehicle and contents from damage before, during and after removing and fitting activities
6. your workplace procedures for the referral of problems and reporting delays to the completion of work
7. the importance of reporting anticipated delays to the relevant person(s) promptly
8. how to prepare, test and use the tools and equipment required for the removal, replacement and/or refitting of body panels and ancillary fittings
9. the properties of component materials involved in the construction of the vehicle in the areas that will be worked on during repair
10. the properties and safe use of body component sealants, adhesives and anti-corrosion materials
11. the type of sealants and anti-corrosion materials to use and the manufacturer's recommended methods for their application and thickness
12. how to apply sealants and anti-corrosion materials
13. how to interpret and use sources of information relevant to the removal and refitting of body panels
14. the need for correct alignment of panels and the methods used to achieve this
15. the types of quality control checks that can be used to ensure correct alignment and contour of panels and operation of components to manufacturer's specification
16. how to work safely avoiding damage to the vehicle and its systems
17. the methods of storing removed components and the importance of storing them correctly and in accordance with legal requirements
18. the removal and replacement procedures for body panels using mechanical fastening techniques
19. how panel removal and refitting affects the overall body structure of the vehicle
20. the manufacturer's approved methods of working for the removal and replacement of body panels

Scope/range

All of the items listed below form part of this National Occupational Standard.

Range:

1. Body panels include combinations of 3 or more adjacent panels (Examples of this include: two doors and a wing; two wings and a bonnet; bonnet, wing and door on the same side; bumper, wing and bonnet; bonnet, wing and bolted on front panel).

2. Materials include all component materials in the repair area.

3. Fitting methods include mechanical fastening.

4. Tools and Equipment are:

a) workshop equipment
b) generic hand tools
c) manufacturer's specified and specialist tools

IMIARBBP05

Remove, Replace and/or Refit Motor Vehicle Body Panels

Developed by	IMI
Version Number	2
Date Approved	December 2014
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Validity	Current
Status	Original
Originating Organisation	IMI
Original URN	IMIARBBP05
Relevant Occupations	Accident Repair Technicians; Body Repair and Alignment Technician (Automotive); Body Repair Technician (Automotive)
Suite	Accident Repair - Body
Keywords	Remove Replace Refit Motor Vehicle Body Panels

IMIARBBP06

Identify and Rectify Minor Repairs to Motor Vehicle Body Panels

Overview

This standard is about repairing body panels using a variety of techniques.

Performance criteria

You must be able to:

1. identify component materials involved in the construction of the vehicle in the areas that will be worked on during repair, prior to working on the vehicle
2. use the appropriate personal protective equipment when carrying out repairs to exterior body panels
3. protect the vehicle and its contents effectively when carrying out repairs to exterior body panels
4. inspect, prepare and use all the tools and equipment required following manufacturers' instructions
5. carry out repairs to non-structural body panels following manufacturers' methods/instructions, recognised researched repair methods, your workplace procedures as well as health, safety and legal requirements
6. use specialist dent removal tools effectively to reform all damaged panels
7. complete repairs to exterior body panels so they are restored to their original contour using hand tools and filling materials effectively
8. avoid damaging other components, standards and panels on the vehicle
9. replace correctly any sealer, anti-corrosion and sound deadening materials which were removed prior to the repair
10. ensure all plastic repairs regain the strength of the original part
11. complete repaired components to an agreed condition ready for refinishing processes
12. complete all activities within the agreed timescale
13. report any anticipated delays in completion to the relevant person(s) promptly

Knowledge and understanding

You need to know and understand:

1. the health and safety legislation and workplace procedures relevant to workshop practices and personal and vehicle protection when repairing body panels
2. the vehicle work specification agreed
3. the importance of working to agreed timescales and keeping others informed of progress
4. the relationship between time, cost and profitability
5. your workplace procedures for the referral of problems
6. the importance of reporting anticipated delays to the relevant person(s) promptly
7. the requirements for protecting the vehicle and contents from damage before, during and after repair activities
8. the principles of the selection and use of hand tools for metal finishing and plastic filling repairs
9. how to select the correct tools and equipment to carry out reshaping work, including specialist dent removal tools
10. how to prepare, test, use and maintain the hand and power tools required to prepare damage and reshape damaged areas
11. the properties of component materials involved in the construction of the vehicle in the areas that will be worked on during repair
12. how to mix and apply plastic fillers
13. the properties and use of metals used to manufacture body panels
14. the properties and safe use of types of filling materials used to repair panels
15. the different types and grades of abrasive and their use
16. the techniques for identifying the type of plastics used for manufactured components
17. how to interpret and use sources of information relevant to the removal of body components
18. how to prepare the vehicle to avoid contamination
19. how to prepare damaged areas to facilitate repairs
20. how to repair plastic components using thermal and adhesive techniques
21. how to rough out and metal finish body panels
22. how to reshape filling materials to match the original panel contour
23. how to finish repairs to a suitable agreed condition for refinishing
24. how to work safely avoiding damage to the vehicle and its systems
25. the techniques for reshaping damaged body panels using hand and

specialist tools

26. the procedures for reinstating anti-corrosion, sealant and sound deadening materials
27. the procedures for repairing damage to plastic components
28. the techniques and processes for plastic repairs, hot shrinking, panel pulling, metal finishing, plastic filling, indirect hammering, direct hammering spring hammering, body filing and application of body filler/stopper
29. the techniques used to regain the contours of repaired plastic components
30. methods of checking reshaped panel contours for accuracy
31. standards of finish required to enable the next stage of repairs to proceed
32. the manufacturer's approved methods of working for the preparation and repair of (non-structural) body panels
33. the pedestrian safety aspects of repairability of vehicles

Scope/range

All of the items listed below form part of this National Occupational Standard.

Range:

1. Repairs are:

a) body filling and finishing of flat areas of a panel
b) repairs to dents that are over 70 mm in diameter in body panels, including curvature panels and swage lines
c) repairs to splits and scuffs on plastic components

2. Vehicle body panels are:

a) non-permanently fixed panels
b) permanently fixed component

3. Techniques and processes are:

a) plastic repairs
b) shrinking
c) panel pulling
d) metal finishing
e) plastic filling
f) panel beating
g) indirect hammering
h) direct hammering
i) spring hammering
j) body filing
k) application of body filling/stopper

4. Tools and Equipment are:

a) workshop equipment
b) generic hand tools
c) manufacturer's specified and specialist tools

IMIARBBP06

Identify and Rectify Minor Repairs to Motor Vehicle Body Panels

Developed by	IMI
Version Number	2
Date Approved	December 2014
Indicative Review Date	December 2017
Validity	Current
Status	Original
Originating Organisation	IMI
Original URN	IMIARBBP06
Relevant Occupations	Accident Repair Technicians; Body Repair and Alignment Technician (Automotive); Body Repair Technician (Automotive)
Suite	Accident Repair - Body
Keywords	Minor Repairs Motor Vehicle Body Panels

IMIARBBP13

Remove and Replace Motor Vehicle Body Panels Including Permanently Fixed Panels

Overview

This standard is about removing a variety of exterior and sub-structure body panels and panel sections, including permanently fixed panels, where these are damaged and replaced with new or repaired replacements. The ability to weld vehicle panels is required.

Performance criteria

You must be able to:

1. identify component materials involved in the construction of the vehicle in the areas that will be worked on during repair, prior to working on the vehicle
2. wear suitable Personal Protective Equipment (PPE) throughout all vehicle body panel removal and replacement activities
3. inspect, prepare and use all the tools and equipment required, following manufacturers' instructions, prior to use
4. remove replace and/or refit all necessary vehicle body panels and assemblies following the manufacturer's methods/instructions, recognised researched repair methods, your workplace procedures as well as health, safety and legal requirements
5. seek guidance from the relevant person(s) promptly where there is the potential for your work to disturb other vehicle systems
6. use replacement body panels and assemblies which conform to the vehicle specifications for dimensions, materials and functional capability
7. use and apply sealants and weld primers and anti-corrosion treatments conforming to the material or vehicle manufacturer's specification
8. ensure all test weld pieces conform to the current British Standard for appearance and penetration
9. ensure permanently fixed panels are replaced without incurring damage to the vehicle systems
10. ensure all refitted body panels are aligned correctly with adjacent panels and fittings to manufacturers tolerances (panel gaps)
11. complete all removal and replacement activities within the agreed timescale
12. report any anticipated delays in completion to the relevant person(s) promptly

Knowledge and understanding

You need to know and understand:

1. the health and safety legislation and workplace procedures relevant to workshop practices, personal and vehicle protection when removing and replacing vehicle body panels
2. the dangers of cross contamination of material such as aluminium and steel
3. the requirements of manufacturer's warranty agreements
4. the vehicle work specification agreed
5. your workplace procedures for the referral of problems, reporting of delays to the completion of work and personal protection
6. the requirements for protecting the vehicle and contents from damage before, during and after removing and replacing vehicle body panels
7. the importance of working to agreed timescales and keeping others informed of progress
8. the relationship between time, cost and profitability
9. the importance of reporting anticipated delays to the relevant person(s) promptly
10. how to prepare, test and use the tools and equipment required for the removal and replacement of vehicle body panels and ancillary fittings
11. how to operate resistance spot welding and Metal Inert Gas (MIG)/Metal Active Gas (MAG) welding equipment to achieve welds to the current British Standard
12. how to test Resistance Spot weld strength
13. how to carry out bonding/riviting cold repairs
14. the properties of component materials involved in the construction of the vehicle in the areas that will be worked on during repair
15. the properties of sealants, adhesives and anti corrosion materials and the requirements for their safe use
16. the type of sealants and anti-corrosion materials to use and the manufacturer's recommended methods for their application and thickness
17. how to use adhesive bonding materials
18. how to select and apply sealants and anti-corrosion materials
19. the principles of chassis frame and monocoque vehicle construction
20. how to remove vehicle manufacturers original joining techniques
21. how to identify manufacturer's joining techniques and how they may differ to the repair method
22. the principles of thermal and non-thermal joining techniques ie Spot welding, Metal Inert Gas (MIG)/Metal Active Gas (MAG), Bonding etc
23. the different types of mechanical fixings for vehicle body panels and when

and why they should be used

24. the repair and welding implications of working with galvanised coatings, mild steels, HSS, UHSS and aluminium alloys
25. how panel removal and refitting affects the overall body structure of the vehicle
26. the causes and rectification of distortion resulting from welding
27. how to find, interpret and use sources of information relevant to the removal and replacement of vehicle body panels and assemblies
28. how to remove and replace vehicle body panels and assemblies
29. how to remove and replace door skins
30. how to establish cut lines for partial panel replacement
31. how to prepare all edges to be joined
32. how to select the correct joints and joining processes to match the repair area
33. the importance and implications of panel clamping and alignment to match existing contours and gaps
34. how to work safely avoiding damage to the vehicle and its systems
35. the importance and implications of checking the accuracy of repair work
36. the types of quality control checks that can be used to ensure correct alignment and contour of panels and the operation of components to manufacturer's specification
37. the methods of storing removed components and the importance of storing them correctly and in accordance with legal requirements

Scope/range

All of the items listed below form part of this National Occupational Standard.

Range:

1. Body panels are:

a) non-permanently fixed body panels
b) welded exterior
c) welded sub-structure panels (e.g. rear quarter panel, rear panel, roof, chassis legs, inner wheel housing, boot floors, complete sill, A post, B post, C post, D post and cross members)
d) bonded panels (e.g. any panel that is fixed by adhesive bonding as part of the original manufacturer's process or approved repair process)

2. Fitting methods are:

a) welding
b) mechanical fastening
c) adhesive bonding

3. Tools and Equipment are:

a) workshop equipment
b) generic hand tools
c) manufacturer's specified and specialist tools

IMIARBBP13

Remove and Replace Motor Vehicle Body Panels Including Permanently Fixed Panels

Developed by	IMI
Version Number	2
Date Approved	December 2014
Indicative Review Date	December 2017
Validity	Current
Status	Original
Originating Organisation	IMI
Original URN	IMIARBBP13
Relevant Occupations	Accident Repair Technicians; Body Repair and Alignment Technician (Automotive); Body Repair Technician (Automotive)
Suite	Accident Repair - Body
Keywords	Remove Replace Motor Vehicle Body Panels Permanently Fixed Panels

IMIARBBP14

Identify and Rectify Major Repairs to Motor Vehicle Body Panels

Overview

This standard is about repairing complex and difficult to access damage to a range of body panel types using a variety of preparation and reinstatement techniques, including hydraulic reforming and panel beating to retain panel contour and structural integrity.

Performance criteria

You must be able to:

1. identify component materials involved in the construction of the vehicle in the areas that will be worked on during repair, prior to working on the vehicle
2. select suitable personal protective equipment to wear and use vehicle coverings throughout all vehicle body panel repair activities
3. inspect, prepare and use the tools and equipment required following manufacturers' instructions prior to use
4. ensure your methods of preparation leave sub-structure body panels are clean, free from materials likely to hinder repair and free of surface finishes when required
5. prepare and reinstate vehicle body panels using the equipment recommended and following the equipment manufacturer's methods/instructions, recognised researched repair methods, your workplace procedure as well as health, safety and legal requirements
6. seek guidance from the relevant person(s) promptly where there is the potential for your work to disturb other vehicle systems
7. ensure all repaired body panels are reinstated to their original specified shape, strength and dimensions
8. complete repaired components to an agreed condition ready for refinishing processes
9. complete all repair activities within the agreed timescale
10. report any anticipated delays in completion to the relevant person(s) promptly

Knowledge and understanding

You need to know and understand:

1. the health and safety legislation and workplace procedures relevant to workshop practices and personal and vehicle protection when repairing vehicle body panels
2. the requirements of manufacturer's warranty agreements
3. the vehicle work specification agreed
4. your workplace procedures for the referral of problems, reporting of delays to the completion of work and personal protection
5. the requirements for protecting the vehicle and contents from damage before, during and after repairing vehicle body panels
6. the importance of working to agreed timescales and keeping others informed of progress
7. the relationship between time, cost and profitability
8. your workplace procedures for the referral of problems
9. the importance of reporting anticipated delays to the relevant persons(s) promptly
10. the principles governing the selection and use of hand tools for metal finishing and plastic filling repairs
11. the selection and use of panel beating and hydraulic reforming equipment, including specialist pulling systems
12. how to prepare, test, use and maintain the tools and equipment required to repair vehicle body panels
13. how to adapt hydraulic push equipment to perform pulling operations
14. the properties of component materials involved in the construction of the vehicle in the areas that will be worked on during repair
15. the types and selection of filling materials, their preparation and application
16. the properties, types, grades and use of abrasives used in the vehicle body panel repair process
17. the properties and safe use of types of filling materials used to repair panels
18. how to mix and apply fillers and stoppers used in repair
19. how to prepare the vehicle to avoid contamination
20. how to assess the extent of damage, including corrosion damage
21. the principles of chassis frame and monocoque vehicle construction
22. how body panel and component damage can affect other panels and the operation of vehicle systems
23. the factors determining the use of specific preparation and repair methods
24. the repair and joining technique implications of working with mild, high and

ultra high strength steels, aluminium alloys, galvanised coatings

25. the consequences of using inappropriate repair methods
26. the principles associated with hot and cold shrinking
27. how heat can be used to assist reforming
28. how heating can affect the properties of steels
29. the techniques for identifying the type of plastics used for manufactured components
30. the procedures for reinstating anti-corrosion, sealant and sound deadening materials
31. the causes and rectification of distortion resulting from welding
32. the manufacturer's approved methods of working for the preparation and repair of vehicle body panels and components
33. the specification for panel shapes, dimensions and tolerances for the vehicles worked upon
34. the type of quality control checks that can be used to ensure the correct contour and standard of finish
35. how to interpret and use sources of information relevant to the repair of vehicle body panels and components
36. how to prepare damaged areas to facilitate repairs
37. how to prepare the panel surface prior to filling
38. how to repair corrosion damage
39. how to remove protective materials
40. how to repair and reinstate vehicle body panel contours and retain structural integrity to components using body filling operations, metal finishing, plastic filling, panel beating, panel shrinking, hydraulic reforming, specialist dent removal tools
41. the techniques for reshaping damaged vehicle body panels using hand and specialist tools
42. how to check the accuracy of reinstated vehicle body panel shape
43. how to complete repair to an agreed condition ready for refinishing process
44. how to work safely avoiding damage to the vehicle and its systems
45. how pedestrian safety aspects affect the repairability of vehicles

Scope/range

All of the items listed below form part of this National Occupational Standard.

Range:

1. Repair activities are:

a) correction of severely distorted panels
b) to difficult to access panel damage
c) to fractures on plastic panels

2. Vehicle body panels are:

a) non-permanently fixed panels
b) permanently fixed component
c) sub-structure component
d) bonded panels

3. Reinstatement methods are:

a) panel beating
b) panel shrinking
c) hydraulic reforming
d) body filling operations
e) metal finishing
f) plastic repair
g) specialist dent removal methods

4. Tools and Equipment are:

a) workshop equipment
b) generic hand tools
c) manufacturer's specified and specialist tools

Identify and Rectify Major Repairs to Motor Vehicle Body Panels

Developed by	IMI
Version Number	2
Date Approved	December 2014
Indicative Review Date	December 2017
Validity	Current
Status	Original
Originating Organisation	IMI
Original URN	IMIARBBP14
Relevant Occupations	Accident Repair Technicians; Body Repair and Alignment Technician (Automotive); Body Repair Technician (Automotive)
Suite	Accident Repair - Body
Keywords	Major Repairs Motor Vehicle Body Panels

IMIARBBP17

Identify and Rectify Motor Vehicle Body Misalignment

Overview

This standard is about the identification and realignment of vehicle distortion using body alignment jigs.

Performance criteria

You must be able to:

1. use the appropriate personal protective equipment when carrying out all rectification activities
2. protect the vehicle, its contents and systems effectively when carrying out all rectification activities
3. support vehicle misalignment rectification activities by reviewing vehicle data from manufacturers and technical data specific to the vehicle
4. prepare, test and setup all the tools and equipment required, following equipment manufacturers' instructions, prior to use
5. load and secure the vehicle to the body jig correctly following the equipment manufacturer's instructions and health and safety requirements
6. establish the extent of the vehicle misalignment accurately and completely
7. align and anchor areas adjacent to the damage correctly, in a way that prevents further damage to the vehicle
8. attach the pulling system securely to the damaged components and operate it correctly to achieve the realignment required
9. operate the pulling system in a way that minimises the risk of injury to yourself and others
10. ensure your rectification activities restore the vehicle to the correct specification and tolerances
11. complete all rectification activities within the agreed timescale
12. report any anticipated delays in completion to the relevant person(s) promptly

Knowledge and understanding

You need to know and understand:

1. the safety requirements specific to vehicle misalignment rectification
2. the health and safety legislation and workplace procedures relevant to workshop practices and personal and vehicle protection
3. the vehicle work specification agreed
4. the requirements of manufacturers' warranty agreements.
5. your workplace procedures for the referral of problems, reporting of delays to the completion of the work and personal protection
6. the importance of working to agreed timescales and keeping others informed of progress
7. the relationship between time, cost and profitability
8. your workplace procedures for the referral of problems
9. your workplace requirements for keeping records
10. the importance of reporting anticipated delays to the relevant person(s) promptly
11. the constraints of the type of materials used in vehicle construction places on the choice of repair equipment
12. how to prepare, test and setup all equipment required for misalignment rectification
13. how to install vehicles on misalignment rectification equipment, including the use of lifting equipment
14. how to use rectification equipment including hand and powered tools, safety chains (safety measure), hydraulic push and pull, and body alignment jigs (bracket system and/or measuring system)
15. the correct use of clamps, restraints and supports to minimise additional damage during repair
16. the principles of chassis frame and monocoque vehicle construction
17. the principles of damage assessment and identification of direct and indirect damage
18. the function of the pulling system and the criteria for selection – vector, pull arm, and tower systems, both floor mounted and bench mounted
19. how to use geometric principles of alignment in the absence of a data sheet
20. the properties of vehicle body construction materials
21. how to find, interpret and use sources of information relevant to the rectification of vehicle misalignment
22. how to establish the extent of misalignment using measuring equipment and/or measuring system
23. how to realign vehicles to the manufacturer's original specification

24. how to work safely avoiding damage to vehicles, personal injury and injury to colleagues
25. the importance of following manufacturers' and/or approved research repair methods (including use of materials and equipment)
26. the consequences of failing to follow manufacturers' and/or research repair methods or instructions and data sheets

Scope/range

All of the items listed below form part of this National Occupational Standard.

Range:

1. Rectification activities are:

a) visual examination
b) setting up
c) measurement in conjunction with alignment measuring equipment
d) realignment using pulling equipment

2. Tools and Equipment are:

a) workshop equipment
b) generic hand tools
c) manufacturer's specified and specialist tools

Identify and Rectify Motor Vehicle Body Misalignment

Developed by	IMI
Version Number	2
Date Approved	December 2014
Indicative Review Date	December 2017
Validity	Current
Status	Original
Originating Organisation	IMI
Original URN	IMIARBBP17
Relevant Occupations	Accident Repair Technicians; Body Repair and Alignment Technician (Automotive); Body Repair Technician (Automotive)
Suite	Accident Repair - Body
Keywords	Identify Rectify Motor Vehicle Body Misalignment

IMIBB19
Motor vehicle body MIG/MAG welding operations

Overview

This unit is about joining materials correctly and effectively using Mig/Mag welding techniques and procedures.

IMIBB19
Motor vehicle body MIG/MAG welding operations

Performance criteria

You must be able to:

P1 use the appropriate personal protective equipment when carrying out MIG/MAG welding operations
P2 protect the vehicle and its contents effectively when carrying out MIG/MAG welding operations
P3 prepare material and align to enable suitable join to be achieved
P4 (Meeting flanges must be treated following manufacturers procedures before joining)
P5 select, set up and use the correct **tools and equipment** for carrying out MIG/MAG welding operations
P6 ensure that the **tools, equipment and PPE** you require are in a safe working condition
P7 set up your equipment to carry out MIG/MAG welding operations
- P7.1 check suitability of gas / filler wire and size for material to be joined
- P7.2 check parameters are set correctly
- P7.3 check consumables are correct
- P7.4 feed rollers and welding tip

P8 carry out mig/mag welding operations following:
- P8.1 recognised researched repair methods(see guidance document)
- P8.2 test procedures and provide test coupons on equivalent material in accordance with british standards
- P8.3 manufacturers processes, methods and procedures
- P8.4 your workplace procedures
- P8.5 health, safety and legal requirements

P9 avoid damaging other components, units, panels and surfaces on the vehicle and the surrounding work area
P10 recognise when your weld is not forming correctly and what action needs to be taken
P11 inspect and assess MIG/MAG weld quality in accordance with British Standards and manufacturers specification
P12 check integrity of weld and record the type of weld achieved on the appropriate paper work Test pieces must be recorded and stored
P13 dress the joint area without reducing material thickness and protect the repaired area to inhibit corrosion where applicable
P14 clean and store PPE and equipment in appropriate manner
P15 report any additional faults you notice during the course of your work to the relevant person(s) promptly
P16 report any delays in completing your work to the relevant person(s) promptly
P17 carry out MIG/MAG welding operations within the agreed timescale
P18 complete work records accurately, in the format required and pass them

to the relevant person(s) promptly

IMIBB19
Motor vehicle body MIG/MAG welding operations

Knowledge and understanding

You need to know and understand:

Legislative and organisational requirements and procedures

K1 the health, safety and legal requirements relating to the joining of materials using MIG/MAG welding techniques

K2 your workplace procedures for:
- K2.1 the referral of problems
- K2.2 reporting of delays to the completion of work
- K2.3 completion of work records

K3 the work that needs to be done and the standard required

K4 the requirements for protecting the vehicle and contents from damage before, during and after the joining of materials using MIG/MAG welding techniques

K5 the importance of selecting, using and maintaining the appropriate personal protective equipment when the joining of materials using MIG/MAG welding techniques

K6 how to find, interpret and use sources of information applicable to the joining of materials using MIG/MAG welding techniques

K7 how to select, check, maintain and set up all of the tools and equipment required to correctly join materials using MIG/MAG welding techniques

K8 the different types of welding processes, techniques and joints used for the joining of materials when using MIG/MAG welding techniques

K9 the correct surface preparation methods to ensure a good MIG/MAG weld is achieved and the reasons why surface preparation is important

K10 the faults and defects that can occur when carrying out MIG/MAG welding and the common causes of these faults

K11 the need for correct alignment of materials and the methods used to achieve this

K12 the types of quality control checks that can be used to ensure correct joining of materials

K13 how to inspect and assess MIG/MAG welding in accordance to British Standards

K14 when MIG/MAG welding should be used to join materials

K15 the advantages of MIG/MAG welding techniques over other welding methods

K16 the different types of joint that can be used to join materials using MIG/MAG welding, including:
- K16.1 Lap Plug
- K16.2 Lap Seam
- K16.3 Butt Joint
- K16.4 Brace Joint
- K16.5 Fillet Joint

IMIBB19

Motor vehicle body MIG/MAG welding operations

Additional Information

Scope/range related to performance criteria

1. Examples of PPE for MIG/MAG welding operations includes

1.1. face mask with appropriate eye protection
1.2. protective / flame retardant coveralls
1.3. protective / flame retardant gauntlets
1.4. steel toe cap boots
1.5. appropriate vehicle protection
1.6. appropriate protection for others in the workshop
1.7. fume mask

IMIBB19

Motor vehicle body MIG/MAG welding operations

Developed by	IMI Ltd
Version number	1
Date approved	February 2010
Indicative review date	February 2012
Validity	Current
Status	Original
Originating organisation	IMI Ltd
Original URN	9
Relevant occupations	Engineering; Vehicle Trades
Suite	Body Building
Key words	Motor Vehicle Body MIG MAG Welding Operations

IMIARBBP20

Carry Out Motor Vehicle Body Resistance Spot Welding Operations

Overview

This standard is about joining materials correctly and effectively using Resistance Spot welding techniques.

Performance criteria

You must be able to:

1. use the appropriate Personal Protective Equipment (PPE) and check it is fit for purpose before carrying out Resistance Spot welding operations
2. protect the vehicle, its systems and its contents effectively when carrying out Resistance Spot welding operations
3. prepare material and align to enable suitable join to be achieved (mating flanges must be treated following manufacturers procedures before joining)
4. select, set up and use the correct tools and equipment in order to correctly carry out Resistance Spot welding operations
5. ensure that the tools, equipment and Personal Protective Equipment (PPE) you require are in a safe working condition and are correct for the joining operation that you are to be completing
6. set up your equipment to carry out Spot welding operations checking suitability of the air supply and pressure, the current supply, the consumables are correct and the suitability/serviceability of electrodes and tips
7. carry out Spot welding operations following recognised researched repair methods, test procedures in accordance to British Standards (peel/sheer/nugget size), manufacturer's processes, methods and procedures, your workplace processes, methods and procedures as well as health, safety and legal requirements
8. avoid damaging other components, standards, panels and surfaces on the vehicle and the surrounding work area
9. recognise when your weld is not forming correctly and what action needs to be taken
10. inspect and assess Resistance Spot weld quality in accordance to British Standards, including weld pitch, indention/weld profile, heat zone, nugget size and peel and shear test
11. check integrity of weld and record the type of weld achieved on the appropriate paper work. Test pieces must be recorded and stored
12. dress and protect the repaired area to inhibit corrosion where applicable
13. clean and store Personal Protective Equipment (PPE) and equipment in appropriate manner
14. report any additional faults you notice during the course of your work to the relevant person(s) promptly
15. report any delays in completing your work to the relevant person(s) promptly
16. carry out Resistance Spot welding operations within the agreed timescale
17. complete work records accurately, in the format required and pass them to

the relevant person(s) promptly

Knowledge and understanding

You need to know and understand:

1. the health, safety and legal requirements relating to the joining of materials using Resistance Spot welding techniques
2. your workplace procedures for carrying out appropriate risk assessment(s), the referral of problems, reporting of delays to the completion of work and completion of work records
3. the constraints of the type of materials used in vehicle construction places on the choice of repair equipment
4. how to prepare, test and adjust all equipment required for Resistance Spot welding techniques
5. the work that needs to be done and the standard required
6. the requirements for protecting the vehicle and contents from damage before, during and after the joining of materials using Resistance Spot welding techniques
7. the importance of selecting, using and maintaining the appropriate Personal Protective Equipment (PPE) when the joining of materials using Resistance Spot welding techniques
8. how to find, interpret and use sources of information (including repair methods) applicable to the joining of materials using Resistance Spot welding techniques
9. how to select, check, maintain and set up all of the tools and equipment required to correctly join materials using Resistance Spot welding techniques
10. the different types of welding processes, techniques and joints used for the joining of materials when using Resistance Spot welding techniques
11. the correct surface preparation methods to ensure the correct Resistance spot weld is achieved and the reasons why surface preparation is important
12. the faults and defects that can occur when carrying out Resistance Spot welding and the common causes of these faults
13. the need for correct alignment of materials and the methods used to achieve this
14. the types of quality control checks that can be used to ensure correct joining of materials e.g. test coupons
15. how to inspect and assess resistance weld quality in accordance to British Standards including weld pitch, indention/weld profile, heat zone, nugget size, peel and shear test
16. the correct use of adhesives with Resistance Spot welding techniques

Scope/range

All of the items listed below form part of this National Occupational Standard.

Range:

1. Personal Protective Equipment (PPE) for Resistance Spot welding operations includes:

a) face mask with appropriate eye protection
b) protective/Flame retardant coveralls
c) protective/Flame retardant gauntlets
d) steel toe cap boots
e) appropriate vehicle protection
f) appropriate protection for others in the workshop
g) fume mask

2. Tools and Equipment are:

a) workshop equipment
b) generic hand tools
c) manufacturer's specified and specialist tools

IMIARBBP20

Carry Out Motor Vehicle Body Resistance Spot Welding Operations

Developed by	IMI
Version Number	2
Date Approved	December 2014
Indicative Review Date	December 2017
Validity	Current
Status	Original
Originating Organisation	IMI
Original URN	IMIARBBP20
Relevant Occupations	Accident Repair Technicians; Body Repair and Alignment Technician (Automotive); Body Repair Technician (Automotive)
Suite	Accident Repair - Body
Keywords	Motor Vehicle Body Resistance Spot Welding Operations

IMIARBBP21

Carry Out Motor Vehicle Body Metal Inert Gas (MIG) Brazing Operations

Overview

This standard is about joining materials correctly and effectively using Metal Inert Gas (MIG) Brazing techniques and procedures.

Performance criteria

You must be able to:

1. use the appropriate personal protective equipment and check it is fit for purpose before carrying out Metal Inert Gas (MIG) Brazing operations
2. protect the vehicle and its contents effectively when carrying out Metal Inert Gas (MIG) Brazing operations
3. prepare material and align to enable suitable join to be achieved. Mating flanges must be treated following manufacturers procedures before joining
4. select, set up and use the correct tools and equipment for carrying out Metal Inert Gas (MIG) Brazing operations
5. ensure that the tools, equipment and Personal Protective Equipment (PPE) you require are in a safe working condition
6. set up your equipment to carry out Metal Inert Gas (MIG) Brazing operations checking suitability of gas/filler wire and size for material to be joined, parameters are set correctly, consumables are correct, feed rollers and welding tips
7. carry out Metal Inert Gas (MIG) Brazing operations following recognised researched repair methods(see guidance document), test procedures and provide test coupons on equivalent material in accordance with recognised standards, manufacturers processes, methods and procedures, your workplace procedures as well as health, safety and legal requirements
8. avoid damaging other components, standards, panels and surfaces on the vehicle and the surrounding work area
9. recognise when your braze is not forming correctly and what action needs to be taken
10. inspect and assess Metal Inert Gas (MIG) Braze weld quality in accordance to recognised standards
11. check integrity of braze and record the type of joint achieved on the appropriate paper work
12. make sure test pieces must be recorded and stored
13. dress the joint area without reducing material thickness and protect the repaired area to inhibit corrosion where applicable
14. clean and store Personal Protective Equipment (PPE) and equipment in appropriate manner
15. report any additional faults you notice during the course of your work to the relevant person(s) promptly
16. report any delays in completing your work to the relevant person(s) promptly
17. carry out Metal Inert Gas (MIG) Brazing operations within the agreed timescale

18. complete work records accurately, in the format required and pass them to the relevant person(s) promptly

Knowledge and understanding

You need to know and understand:

1. the health, safety and legal requirements relating to the joining of materials using Metal Inert Gas (MIG) Brazing techniques
2. your workplace procedures for carrying out appropriate risk assessment(s), the referral of problems, reporting of delays to the completion of work and completion of work records
3. the work that needs to be done and the standard required
4. the requirements for protecting the vehicle and contents from damage before, during and after the joining of materials using Metal Inert Gas (MIG) Brazing techniques
5. the importance of selecting, using and maintaining the appropriate Personal Protective Equipment (PPE) when the joining of materials using Metal Inert Gas (MIG) Brazing techniques
6. how to find, interpret and use sources of information and repair methods applicable to the joining of materials using Metal Inert Gas (MIG) Brazing techniques
7. how to select, check, maintain and set up all of the tools and equipment required to correctly join materials using Metal Inert Gas (MIG) Brazing techniques
8. the different types of processes, techniques and joints used for the joining of materials when using Metal Inert Gas (MIG) Brazing techniques
9. the correct surface preparation methods to ensure a good Metal Inert Gas (MIG) Braze joint is achieved
10. the faults and defects that can occur when carrying out Metal Inert Gas (MIG) Brazing and the common causes of these faults
11. the need for correct alignment of materials and the methods used to achieve this
12. the types of quality control checks that can be used to ensure correct joining of materials
13. how to inspect and assess Metal Inert Gas (MIG) Brazing in accordance with recognised standards
14. when MIG brazing should be used to join materials
15. the different types of joint that can be used to join materials using MIG Brazing, including Lap Plug, Lap Seam and Butt Joint

Scope/range

All of the items listed below form part of this National Occupational Standard.

Range:

1. Personal Protective Equipment (PPE) for Metal Inert Gas (MIG) Brazing operations includes:

a) face mask with appropriate eye protection
b) protective/flame retardant coveralls
c) protective/flame retardant gauntlets
d) steel toe cap boots
e) appropriate vehicle protection
f) appropriate protection for others in the workshop
g) fume mask

2. Tools and Equipment are:

a) workshop equipment
b) generic hand tools
c) manufacturer's specified and specialist tools

IMIARBBP21

Carry Out Motor Vehicle Body Metal Inert Gas (MIG) Brazing Operations

Developed by	IMI
Version Number	2
Date Approved	December 2014
Indicative Review Date	December 2017
Validity	Current
Status	Original
Originating Organisation	IMI
Original URN	IMIARBBP21
Relevant Occupations	Accident Repair Technicians; Body Repair and Alignment Technician (Automotive); Body Repair Technician (Automotive)
Suite	Accident Repair - Body
Keywords	Motor Vehicle Body MIG Brazing Operations

IMIARBBP22

Carry Out Motor Vehicle Body Cosmetic Aluminium Panel Welding Operations

Overview

This standard is about repairing cosmetic aluminium panels correctly and effectively using appropriate welding techniques, materials and procedures.

Note: This standard is **NOT** to be used for structural aluminium work.

Performance criteria

You must be able to:

1. use the appropriate Personal Protective Equipment (PPE) and check that it is fit for purpose before carrying out cosmetic aluminium welding operations
2. protect the vehicle and its contents effectively when carrying out cosmetic aluminium welding operations
3. prepare material surfaces and align to enable suitable join to be achieved making sure mating flanges are treated following manufacturers procedures before joining
4. select, set up and use the correct tools and equipment in order to correctly carry out cosmetic aluminium welding operations
5. ensure that the tools, equipment and Personal Protective Equipment (PPE) you require are in a safe working condition and are correct for the joining operation that you are to be completing
6. set up your equipment to carry out cosmetic aluminium welding operations checking the suitability of gas/filler wire, the size for material to be joined, the parameters are set correctly, the consumables are correct, the feed rollers, the welding tip and the test kit
7. carry out cosmetic aluminium welding operations following recognised researched repair methods
8. carry out cosmetic aluminium welding operations following test procedures and provide test coupons on equivalent material in accordance with recognised standards
9. carry out cosmetic aluminium welding operations following the manufacturers processes, methods and procedures, your workplace procedures as well as the relevant health, safety and legal requirements
10. avoid damaging other components, units, panels and surfaces on the vehicle and the surrounding work area
11. recognise when your weld is not forming correctly and what action needs to be taken
12. inspect and assess cosmetic aluminium weld quality in accordance to recognised standards
13. check integrity of the weld and record the type of weld achieved on the appropriate paper work
14. dress the joint area without reducing material thickness and protect the repaired area to inhibit corrosion where applicable
15. clean and store Personal Protective Equipment (PPE) and other relevant equipment in the appropriate manner
16. report any additional faults you notice during the course of your work to the relevant person(s) promptly

17. report any delays in completing your work to the relevant person(s) promptly
18. carry out cosmetic aluminium welding operations within the agreed timescale
19. complete work records accurately, in the format required and pass them to the relevant person(s) promptly

Knowledge and understanding

You need to know and understand:

1. the health, safety and legal requirements relating to the cosmetic welding of materials using cosmetic aluminium welding operations
2. your workplace procedures for carrying out appropriate risk assessment(s), the referral of problems, reporting of delays to the completion of work and completion of work records
3. the work that needs to be done and the standard required
4. the requirements for protecting the vehicle and contents from damage before, during and after the joining of materials using cosmetic aluminium welding operations
5. the importance of selecting, using and maintaining the appropriate personal protective equipment when the joining of materials using cosmetic aluminium welding operations
6. how to find, interpret and use sources of information applicable to the cosmetic welding of materials using cosmetic aluminium welding operations
7. how to select, check, maintain and set up all of the tools and equipment required to correctly join materials using cosmetic aluminimum welding operations
8. the different types of welding processes, techniques, materials and joints used for the joining of materials when using cosmetic aluminimum welding operations
9. the correct surface preparation methods to ensure a good cosmetic aluminium weld is achieved and the reasons why surface preparation is important
10. the faults and defects that can occur when carrying out cosmetic aluminium welding and the common causes of these faults
11. the need for correct alignment of materials and the methods used to achieve this
12. when cosmetic aluminium welding operations should be used
13. how to ensure cross contamination does not occur and the effect of cross contamination on cosmetic aluminium

Scope/range

Scope:

All of the items listed below form part of this National Occupational Standard.

1. Examples of Personal Protective Equipment (PPE) for cosmetic aluminimum welding operations includes:
- face mask with appropriate eye protection
- protective/Flame retardant coveralls
- protective/Flame retardant gauntlets
- steel toe cap boots
- appropriate vehicle protection
- appropriate protection for others in the workshop
- fume mask

IMIARBBP22

Carry Out Motor Vehicle Body Cosmetic Aluminium Panel Welding Operations

Developed by	IMI
Version Number	2
Date Approved	December 2014
Indicative Review Date	December 2017
Validity	Current
Status	Tailored
Originating Organisation	IMI
Original URN	IMIBB22
Relevant Occupations	Accident Repair Technicians; Body Repair and Alignment Technician (Automotive); Body Repair Technician (Automotive)
Suite	Accident Repair - Body
Keywords	Motor Vehicle Body Cosmetic Aluminium Panel Welding Operations

IMIBB23
Motor vehicle body TIG welding operations

Overview

This unit is about joining materials correctly and effectively using TIG welding techniques and procedures

IMIBB23
Motor vehicle body TIG welding operations

Performance criteria

You must be able to:

P1 use the appropriate personal protective equipment when carrying out TIG welding operations
P2 protect the vehicle and its contents effectively when carrying out T welding operations
P3 prepare material and align to enable suitable join to be achieved
P4 (Meeting flanges must be treated following manufacturers procedures before joining)
P5 select, set up and use the correct **tools and equipment** in order to correctly carry out TIG welding operations
P6 ensure that the **tools, equipment and PPE** you require are in a safe working condition
P7 set up your equipment to carry out TIG welding operations
- P7.1 check suitability of gas / filler wire and size for material to be joined
- P7.2 check parameters are set correctly
- P7.3 check consumables are correct

P8 carry out TIG welding operations following:
- P8.1 recognised researched repair methods(see guidance document)
- P8.2 test procedures and provide test coupons on equivalent material in accordance with British Standards
- P8.3 Manufacturers processes, methods and procedures
- P8.4 your workplace procedures
- P8.5 health, safety and legal requirements

P9 avoid damaging other components, units, panels and surfaces on the vehicle and the surrounding work area
P10 recognise when your weld is not forming correctly and what action needs to be taken
P11 inspect and assess TIG weld quality in accordance with British Standards and Manufacturers Specification
P12 check integrity of the weld and record the type of weld achieved on the appropriate paper work Test pieces must be recorded and stored
P13 dress the joint area without reducing material thickness and protect the repaired area to inhibit corrosion where applicable
P14 clean and store PPE and equipment in appropriate manner
P15 report any additional faults you notice during the course of your work to the relevant person(s) promptly
P16 report any delays in completing your work to the relevant person(s) promptly
P17 carry out TIG welding operations within the agreed timescale
P18 complete work records accurately, in the format required and pass them to the relevant person(s) promptly

IMIBB23
Motor vehicle body TIG welding operations

Knowledge and understanding

You need to know and understand:

Legislative and organisational requirements and procedures

K1 the health, safety and legal requirements relating to the joining of materials using TIG welding operations

K2 your workplace procedures for:
- K2.1 the referral of problems
- K2.2 reporting of delays to the completion of work
- K2.3 completion of work records

K3 the work that needs to be done and the standard required

K4 the requirements for protecting the vehicle and contents from damage before, during and after the joining of materials using TIG welding operations

K5 the importance of selecting, using and maintaining the appropriate personal protective equipment when the joining of materials using TIG welding operations

K6 how to find, interpret and use sources of information applicable to the joining of materials using TIG welding operations

K7 how to select, check, maintain and set up all of the tools and equipment required to correctly join materials using TIG welding operations

K8 the different types of welding processes, techniques and joints used for the joining of materials when using TIG welding operations

K9 the correct surface preparation methods to ensure a good TIG weld is achieved

K10 the faults and defects that can occur when carrying out TIG welding and the common causes of these faults

K11 the need for correct alignment of materials and the methods used to achieve this

K12 the types of quality control checks that can be used to ensure correct joining of materials

K13 how to inspect and assess TIG welding in accordance to British Standards

K14 when TIG welding should be used to join materials

K15 the advantages of TIG welding techniques over other welding methods

K16 the different types of joint that can be used to join materials using TIG welding

IMIBB23
Motor vehicle body TIG welding operations

Additional Information

Scope/range related to performance criteria

1. Examples of PPE for TIG welding operations includes

1.1. face mask with appropriate eye protection
1.2. protective / flame retardant coveralls
1.3. protective / flame retardant gauntlets
1.4. steel toe cap boots
1.5. appropriate vehicle protection
1.6. appropriate protection for others in the workshop
1.7. fume mask

IMIBB23

Motor vehicle body TIG welding operations

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Relevant occupations	Engineering; Vehicle Trades
Suite	Body Building
Key words	Motor Vehicle Body TIG Welding Operations

IMIBB24
Motor vehicle body mechanical fastening operations

Overview

This unit is about joining materials effectively using mechanical joining techniques.

IMIBB24
Motor vehicle body mechanical fastening operations

Performance criteria

You must be able to:

P1 use the appropriate personal protective equipment when carrying out mechanical joining operations
P2 protect the vehicle and its contents effectively when carrying out mechanical joining operations
P3 prepare material and align to enable suitable join to be achieved
P4 (meeting flanges must be treated before joining)
P5 select and use the correct **tools and equipment** for carrying out mechanical joining operations
P6 ensure that the **tools, equipment and PPE** you require are in a safe working condition
P7 set up your equipment to carry out mechanical joining operations
- P7.1 check suitability of joining technique
- P7.2 check suitability of tooling
- P7.3 check consumables are correct

P8 carry out mechanical joining operations following:
- P8.1 manufacturers processes, methods and procedures
- P8.2 your workplace procedures
- P8.3 health, safety and legal requirements

P9 avoid damaging other components, units and panels on the vehicle
P10 recognise when your joint is not forming correctly and what action needs to be taken
P11 check integrity of the join
P12 dress and protect the repaired area to inhibit corrosion where applicable
P13 clean and store PPE and equipment in appropriate manner
P14 report any additional faults you notice during the course of your work to the relevant person(s) promptly
P15 report any delays in completing your work to the relevant person(s) promptly
P16 carry out mechanical joining operations within the agreed timescale
P17 complete work records accurately, in the format required and pass them to the relevant person(s) promptly

IMIBB24
Motor vehicle body mechanical fastening operations

Knowledge and understanding

You need to know and understand:

Legislative and organisational requirements and procedures

K1 the health, safety and legal requirements relating to the joining of materials using mechanical joining techniques and processes

K2 your workplace procedures for:

- K2.1 the referral of problems
- K2.2 reporting of delays to the completion of work
- K2.3 completion of work records

K3 the work that needs to be done and the standard required

K4 the requirements for protecting the vehicle and contents from damage before, during and after the joining of materials using mechanical joining techniques

K5 the importance of selecting, using and maintaining the appropriate personal protective equipment when joining of materials using mechanical joining techniques

K6 how to find, interpret and use sources of information applicable to the joining of materials using mechanical joining techniques

K7 how to select, check and use all the tools and equipment required to join materials using mechanical joining techniques

K8 how to select and use the correct mechanical fastener considering the materials used, strength required, anticipated loading, grip range, maintenance, appearance and cost

K9 the different types of techniques and joints used for the joining of different types of materials when using mechanical joining techniques

K10 the faults that can occur when mechanical joining and the causes of these faults

K11 the need for correct alignment of materials and the methods used to achieve this

K12 the types of quality control checks that can be used to ensure correct joining of materials

K13 how to carry out and assess mechanical joining

IMIBB24
Motor vehicle body mechanical fastening operations

Additional Information

Scope/range related to performance criteria

1. **PPE for Mechanical Fastening operations**, including:
   - 1.1. face mask with appropriate eye shield
   - 1.2. gloves (antivibration gloves if appropriate)
   - 1.3. ear defenders
   - 1.4. steel toe cap boots
   - 1.5. appropriate vehicle protection

2. **Mechanical Joining Operations**, including:
   - 2.1. riveting, (single sided, double sided, self piercing)
   - 2.2. clinching
   - 2.3. bolts and fasteners
   - 2.4. screwing, (self threading, self piercing)
   - 2.5. hybrid joining, (combinations of techniques listed that may also include adhesives)

IMIBB24

Motor vehicle body mechanical fastening operations

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IMIBB25
Motor vehicle body adhesive bonding operations

Overview

This unit is about joining materials effectively using adhesive bonding processes

IMIBB25
Motor vehicle body adhesive bonding operations

Performance criteria

You must be able to:

P1 use the appropriate personal protective equipment when carrying out adhesive processes

P2 protect the vehicle and its contents effectively when carrying out adhesive processes

P3 prepare material and align to enable suitable join to be achieved
Adjoining edges must be treated before joining

P4 select and use the correct **tools and equipment** for carrying out adhesive processes

P5 ensure that the **tools, equipment and PPE** you require are in a safe working condition

P6 set up your equipment to carry out adhesive processes

P7 carry out adhesive processes following:

- P7.1 recognised researched repair methods
- P7.2 your workplace procedures
- P7.3 health, safety and legal requirements

P8 avoid damaging other components, units and panels on the vehicle

P9 recognise when your join is not forming correctly and what action needs to be taken

P10 visually check integrity of the join

P11 dress and protect the repaired area to inhibit corrosion where applicable

P12 clean and store PPE and equipment in appropriate manner

P13 report any additional faults you notice during the course of your work to the relevant person(s) promptly

P14 report any delays in completing your work to the relevant person(s) promptly

P15 carry out adhesive processes within the agreed timescale

P16 complete work records accurately, in the format required and pass them to the relevant person(s) promptly

IMIBB25
Motor vehicle body adhesive bonding operations

Knowledge and understanding

You need to know and understand:

Legislative and organisational requirements and procedures

K1 the health, safety and legal requirements relating to the joining of materials using adhesive processes

K2 your workplace procedures for:

- K2.1 the referral of problems
- K2.2 reporting of delays to the completion of work
- K2.3 completion of work records

K3 the work that needs to be done and the standard required

K4 the requirements for protecting the vehicle and contents from damage before, during and after the joining of materials using adhesive processes

K5 the importance of selecting, using and maintaining the appropriate personal protective equipment when joining materials using adhesive processes

K6 how to find, interpret and use sources of information applicable to the joining of materials using adhesive processes

K7 how to select, check and use all the tools and equipment required to join materials using adhesive processes

K8 the different types of techniques and joints used for the joining of materials when using adhesive processes

K9 the faults that can occur when carrying and using adhesives and the causes of these faults

K10 the need for correct alignment of materials and the methods used to achieve this

K11 the types of quality control checks that can be used to ensure correct joining of materials

K12 how to carry out and assess test coupons

K13 the principles of good joint design for the type of adhesive being used

IMIBB25
Motor vehicle body adhesive bonding operations

Additional Information

Scope/range related to performance criteria

1. Examples of PPE for adhesive bonding processes includes:

1.1. face mask/respirator with appropriate eye shield
1.2. gloves
1.3. safety footwear
1.4. appropriate vehicle protection
1.5. appropriate protection for others in the workshop

IMIBB25

Motor vehicle body adhesive bonding operations

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