



Government of **Western Australia**  
Department of **Mines, Industry Regulation and Safety**  
**Resources Safety**

## **Workshop audit – guide**

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## **Introduction**

This document was reformatted in November 2015. At this time no material changes were made to the content of the guide, which was originally published in June 2010 under the title *Guide to workshops HIF audit 2010*.

*Note: The Safety Regulation System (SRS) has replaced the AXTAT system and all reporting is done online through SRS.*

# 1 Building

## Building

Point	Standard	Guideline
1.1	There is a suitable building provided for use as a workshop.	<p><b>Intent:</b> To ensure that workshop activities can be carried out safely and efficiently.</p> <p><b>Personnel:</b> Manager. Senior engineer.</p> <p><b>Method:</b> Observation.</p>
1.2	Consideration has been given to managing traffic flow in relation to the building.	<p><b>Intent:</b> To ensure that traffic in the vicinity does not present a hazard.</p> <p><b>Personnel:</b> Workshop manager. Supervisor.</p> <p><b>Method:</b> Review documents which indicate that traffic hazards around the workshop have been considered. Check for any obvious obstructions in the workshop area and traffic demarcation signage.</p>
1.3	The building has provision for heating and ventilation.	<p><b>Intent:</b> To ensure that workshop activities can continue irrespective of the climate.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> Observation and interview workshop personnel.</p>
1.4	Illumination is provided in the workshop	<p><b>Intent:</b> To ensure that workshop activities can continue at any hour.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> Observation and interview workshop personnel.</p>

1.5	Required emergency exit doorways are indicated with illuminated signs.	<p><b>Intent:</b> To ensure that doorways for emergency exit are clearly identifiable.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> Observation and interview persons in workshop to determine if location of exits is known. Refer to MSIR 4.31.</p>
1.6	A washroom and toilets are available for workshop personnel.	<p><b>Intent:</b> To ensure that all personnel have access to hygiene facilities.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> Observation and interview workshop personnel.</p>
1.7	Service piping in the workshop is colour coded or labelled.	<p><b>Intent:</b> To ensure that gas, compressed air, water, lubricant, etc. piping in the workshop has been identified and marked as to content, direction and pressure.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> Observation. Interview workshop personnel to determine if piping use is known.</p>
1.8	The building doors are easy to operate.	<p><b>Intent:</b> To ensure that the doors of the building can be opened or closed without hazard.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> Observe operation of the doors and interview workshop personnel.</p>
1.9	Electrical panels are in areas free of combustible material and have unobstructed access.	<p><b>Intent:</b> To minimise fire risk and ensure access for isolation purposes or in an emergency.</p> <p><b>Personnel:</b> N/A.</p> <p><b>Method:</b> Observation.</p>

1.10	Electrical distribution enclosures, connection boxes and panels are properly closed.	<p><b>Intent:</b> To restrict access to unauthorised persons.</p> <p><b>Personnel:</b> N/A.</p> <p><b>Method:</b> Observation.</p>
1.11	Electrical cabling is properly supported on cable trays or in conduits.	<p><b>Intent:</b> To protect the cables from mechanical damage.</p> <p><b>Personnel:</b> N/A.</p> <p><b>Method:</b> Observation.</p>

## 2 Emergency requirements

### Emergency requirements

Point	Standard	Guideline
2.1	Fire control equipment requirements have been determined for the types of fires that may occur.	<p><b>Intent:</b> To ensure that a survey has been conducted to verify that the fire control equipment provided is correct for the types of fires that may occur.</p> <p><b>Personnel:</b> Workshop manager.</p> <p><b>Method:</b> View survey document. Refer to AS4428 - Fire detection.</p>
2.2	Fire control equipment is available and current.	<p><b>Intent:</b> To ensure that fire control equipment is available for immediate use at the workshop.</p> <p><b>Personnel:</b> N/A.</p> <p><b>Method:</b> View documentation to indicate that regular inspection is made of fire equipment; check a sample of equipment tags.</p>
2.3	Signs are provided at the location of fire control equipment.	<p><b>Intent:</b> To ensure that fire control equipment can be easily located when required.</p> <p><b>Personnel:</b> N/A.</p> <p><b>Method:</b> Observation. Refer to AS 2444 – Fire extinguishers.</p>
2.4	Access to fire control equipment is unobstructed.	<p><b>Intent:</b> To ensure that clear access to fire control equipment is maintained.</p> <p><b>Personnel:</b> N/A.</p> <p><b>Method:</b> Observation</p>

2.5	Workshop personnel have been trained in the use of fire control equipment	<p><b>Intent:</b> To ensure that personnel can use fire control equipment if required.</p> <p><b>Personnel:</b> Workshop personnel. Training officer.</p> <p><b>Method:</b> View emergency procedure documentation and training records.</p>
2.6	Fire control drills are held regularly.	<p><b>Intent:</b> To ensure that personnel are practised in the use of fire control equipment.</p> <p><b>Personnel:</b> Workshop personnel. Safety officer.</p> <p><b>Method:</b> Interview workshop personnel, safety officer. Sight list of attendees at fire control drill.</p>
2.7	A safety shower/eyewash is provided where hazardous chemicals are in use.	<p><b>Intent:</b> To ensure that a safety shower/eyewash is available where corrosives such as battery acid or caustic baths are used.</p> <p><b>Personnel:</b> N/A.</p> <p><b>Method:</b> Observation. Refer to AS 4775 – Emergency eye wash &amp; shower.</p>
2.8	Unobstructed access to safety showers/eyewashes is maintained.	<p><b>Intent:</b> To ensure that the emergency facilities can be accessed without hindrance.</p> <p><b>Personnel:</b> N/A.</p> <p><b>Method:</b> Observation.</p>
2.9	First aid facilities are provided.	<p><b>Intent:</b> To ensure that first aid facilities are available for typical injuries such as burns, minor cuts and abrasions, electric shock, etc.</p> <p><b>Personnel:</b> Workshop manager. Safety personnel.</p> <p><b>Method:</b> View facilities and procedures.</p>



2.10	Material Data Safety Sheets (MSDS) are available for all products used in the workshop.	<p><b>Intent:</b> To ensure that emergency information in respect of potentially hazardous substances is immediately available.</p> <p><b>Personnel:</b> Workshop manager.</p> <p><b>Method:</b> View documentation.</p>
2.11	Clean up kits for chemical, oil/fuel spillages are available.	<p><b>Intent:</b> To ensure that the effects of accidental contamination can be minimised.</p> <p><b>Personnel:</b> N/A.</p> <p><b>Method:</b> Observation.</p>
2.12	An OSH noticeboard is located at the workshop displaying current OSH information.	<p><b>Intent:</b> To ensure that a noticeboard is available in the workshop for the posting of safety information.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> Observation.</p>

### 3 Slip/trip hazards

#### Slip/trip hazards

Point	Standard	Guideline
3.1	The workshop has a concrete floor with known load limits.	<p><b>Intent:</b> To ensure that the workshop has a floor that can be kept clean and is suitable for activities such as jacking up heavy equipment, providing foundations for machine tools etc.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> Observation. Interview workshop personnel on the suitability of the workshop floor.</p>
3.2	The condition of the workshop floor, and any inspection pit, does not create slip or trip hazards.	<p><b>Intent:</b> To ensure that the surface of the workshop floor is maintained clear of mud, oil, grease, etc.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> Observation. Interview workshop personnel on the condition of the floor over time. Refer to AS 3661.2 - Slip resistance.</p>
3.3	Drains and pits capture contaminated wash water for treatment, and are covered or protected.	<p><b>Intent:</b> To ensure that the environment is protected and there are no drains creating hazards to persons on foot or operating small mobile plant.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> Observation.</p>
3.4	Inspection pit areas are covered or protective barriers are provided and used.	<p><b>Intent:</b> To ensure that fall hazards at inspection pit areas have been addressed.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> Observation. Interview workshop personnel on the rules for the replacement of inspection pit protection.</p>

3.5	The walkway areas at the workshop are colour defined and free from obstruction.	<p><b>Intent:</b> To ensure walkway traffic areas are marked as such and are available.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> Observe demarcation and employee compliance with it.</p>
3.6	Racks and shelving are provided for the storage of materials used at the workshop.	<p><b>Intent:</b> To ensure that steel sections, plate and other materials are stored suitably and safely.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> Observation. Interview workshop personnel on where materials are stored.</p>
3.7	Mobile and transportable tools and equipment used at the workshop have a designated storage area.	<p><b>Intent:</b> To ensure that tools and equipment used at the workshop are stored suitably and safely.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> Observation. Interview workshop personnel on where tools and items used in the workshop are stored.</p>
3.8	Containers of liquids such as chemicals, oils, etc., are stored in bunded areas.	<p><b>Intent:</b> To minimise the effects of any accidental spillage.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> Observation.</p>
3.9	Drip trays are used where liquids are decanted from bulk containers.	<p><b>Intent:</b> To minimise the effects of any accidental spillage.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> Observation.</p>

3.10	Loose material and debris is cleared from the workshop floor as soon as is practicable.	<p><b>Intent:</b> To ensure that rubbish is cleared from the workshop floor before becoming a hazard.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> Observation. Interview workshop personnel to determine how often the workshop floor is cleaned up.</p>
3.11	Means are provided for the disposal of waste material.	<p><b>Intent:</b> To ensure that waste disposal facilities such as bins and waste oil containers are provided.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> Observation. Interview workshop personnel on where waste materials are disposed of.</p>
3.12	Signs are provided to warn of potential slip hazards.	<p><b>Intent:</b> To ensure that signage is used to warn persons of potential slip hazards resulting from spills, etc.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> Observation of signs. Interview workshop personnel.</p>

## 4 Machinery

### Machinery

Point	Standard	Guideline
4.1	A risk assessment has been done of the fixed workshop machinery in regard to the provision of emergency stop equipment.	<p><b>Intent:</b> To ensure that machines such as pedestal drills, lathes, etc. are risk assessed for the need to provide emergency stop devices.</p> <p><b>Personnel:</b> Workshop manager.</p> <p><b>Method:</b> Observation. Interview workshop personnel.</p>
4.2	The fixed workshop machines, identified in the risk assessment as requiring emergency stop provisions, have operational emergency stops fitted.	<p><b>Intent:</b> To ensure that machines such as pedestal drills, lathes, etc. are fitted with operational emergency stop devices where required.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> Observation. Interview workshop personnel.</p>
4.3	Workshop machinery is guarded to prevent eye damage hazards and nip point hazards.	<p><b>Intent:</b> To ensure that machines e.g. grinders, drills, saws, shears, benders, lathes, woodworking machines, etc. have drive guards and other devices to contain possible hazards.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> Observation. Interview workshop personnel to determine if guards are always in place. Refer to AS 4024.1 – Safety of machinery.</p>
4.4	Fixed machinery is securely anchored down as required.	<p><b>Intent:</b> To ensure machinery is adequately secured to prevent unintended movement.</p> <p><b>Personnel:</b> N/A.</p> <p><b>Method:</b> Observe anchoring provisions.</p>

4.5	Signs are posted to warn of machine operating hazards.	<p><b>Intent:</b> To ensure that machinery operating hazards are identified by signs displayed adjacent to the machine.</p> <p><b>Personnel:</b> N/A.</p> <p><b>Method:</b> Observe major machines such as guillotines, presses, lathes and saws, etc.</p>
4.6	Persons are trained in the use of machinery.	<p><b>Intent:</b> To ensure that machinery is used by certified tradesmen or persons specifically trained to use those items.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> View training records. Interview workshop personnel as to the training they have obtained.</p>
4.7	Machinery in the workshop is adequately maintained.	<p><b>Intent:</b> To ensure that machinery is safe for use.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> View maintenance records. Interview workshop personnel on how often maintenance is done.</p>
4.8	Manufacturer's manuals are kept for machinery operation and maintenance.	<p><b>Intent:</b> To ensure that the machinery can be operated and maintained as intended.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> View manuals. Check that sections are provided on operation and maintenance.</p>
4.9	Classified plant located in the workshop is maintained and inspected in accordance with requirements.	<p><b>Intent:</b> To ensure that classified plant is safe for use.</p> <p><b>Personnel:</b> Workshop manager.</p> <p><b>Method:</b> Interview. View documentation.</p>

## 5 Lifting equipment

### Lifting equipment

Point	Standard	Guideline
5.1	Monorails and overhead cranes have been designed and constructed to recognised engineering standards.	<p><b>Intent:</b> To ensure that a monorail or overhead crane has been designed and constructed to AS 1418.</p> <p><b>Personnel:</b> Workshop manager. Engineer.</p> <p><b>Method:</b> Observation. View documentation to show installation compliance. Such documentation may include design drawings, compliance certificates and markings, deflection test results, etc. Refer to AS 1418 – Cranes, etc. Refer to MSIR 6.34.</p>
5.2	Training is provided in the use of the cranes installed.	<p><b>Intent:</b> To ensure that employees can use the cranes safely.</p> <p><b>Personnel:</b> Workshop personnel. Training officer.</p> <p><b>Method:</b> Verify by observation of training records and interview workshop personnel.</p>
5.3	Crane operators hold a current licence under the national competency based licensing system or transitional equivalent.	<p><b>Intent:</b> To ensure that operators meet competency requirements.</p> <p><b>Personnel:</b> Workshop personnel. Training officer.</p> <p><b>Method:</b> View licence documents and training records.</p>
5.4	Fixed workshop cranes are inspected and maintained.	<p><b>Intent:</b> To ensure that workshop cranes are safe for use.</p> <p><b>Personnel:</b> Workshop personnel. Engineers.</p> <p><b>Method:</b> Interview workshop personnel and view records. Refer to MSIR 6.40.</p>

5.5	Access to overhead travelling crane electrical busbar areas is restricted.	<p><b>Intent:</b> To ensure that potentially hazardous areas are not readily accessible.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> Observation.</p>
5.6	Approved lifting equipment is suitably marked and a register is maintained.	<p><b>Intent:</b> To ensure that lifting equipment is safe for use.</p> <p><b>Personnel:</b> Workshop manager.</p> <p><b>Method:</b> Verify by observation of records and inspect workshop lifting equipment.</p>
5.7	Training is provided in the safe use of lifting equipment.	<p><b>Intent:</b> To ensure that employees can use the lifting equipment safely.</p> <p><b>Personnel:</b> Workshop personnel. Training officer.</p> <p><b>Method:</b> Verify by observation of training records and interview workshop personnel. Refer to AS 2550 – Safe use of cranes. Refer to MSIR 4.13.</p>
5.8	A system of inspection and maintenance of lifting equipment by competent persons is provided.	<p><b>Intent:</b> To ensure that lifting equipment is safe for use.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> Verify by observation and inspection records.</p>
5.9	Damaged lifting equipment is repaired or destroyed.	<p><b>Intent:</b> To ensure that unsafe lifting equipment cannot be used.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> Verify by observation of available lifting equipment and interview workshop personnel.</p>



## 6 Welding and pressure gas equipment

### Welding and pressure gas equipment

Point	Standard	Guideline
6.1	Welding power sources used for “metal arc welding” and/or “air arc gouging” which have a nameplate open-circuit voltage output exceeding 35v DC or 25v AC are fitted with a hazard reducing device (trigger switch or voltage reducing device).	<p><b>Intent:</b> To safeguard persons from harmful electric shocks.</p> <p><b>Personnel:</b> Electrical supervisor.</p> <p><b>Method:</b> Observe nameplate voltage. Refer to the Welding Technology Institute of Australia, Code of Practice Tech. Note 7.</p>
6.2	Electric welding machines are inspected and tested quarterly.	<p><b>Intent:</b> To ensure that the leads/accessories and electrical circuits are safe for use.</p> <p><b>Personnel:</b> Electrical supervisor.</p> <p><b>Method:</b> View maintenance documents. Interview workshop personnel/electrician on maintenance procedures. Refer to Mines Safety Bulletin No. 23.</p>
6.3	Electric welding leads and accessories are inspected monthly.	<p><b>Intent:</b> To ensure that the leads/accessories and electrical circuits are safe for use.</p> <p><b>Personnel:</b> Electrical supervisor.</p> <p><b>Method:</b> View maintenance documents. Interview workshop personnel/electrician on maintenance procedures. Refer to Mines Safety Bulletin No. 23.</p>
6.4	The leads of electrical welding machines are free from insulation damage and other defects.	<p><b>Intent:</b> To ensure that electrical welding leads are safe for use.</p> <p><b>Personnel:</b> N/A.</p> <p><b>Method:</b> Observation. Refer to AS 1674.2 – Safety in welding.</p>

6.5	Damage to the electric welding hand pieces is not evident.	<p><b>Intent:</b> To ensure that the electrical welding handpieces are free from damage that could cause a possible personal electrical hazard.</p> <p><b>Personnel:</b> N/A.</p> <p><b>Method:</b> Observation.</p>
6.6	The building structure is not used as part of the work return circuit of electric welding machines.	<p><b>Intent:</b> To ensure the risk of electric shock or electrocution is minimised.</p> <p><b>Personnel:</b> Electrical supervisor. Welders.</p> <p><b>Method:</b> Observation. Interview personnel.</p>
6.7	Protective screens are used to reduce the intrusion of welding flash to other workshop areas.	<p><b>Intent:</b> To ensure that workshop personnel are protected from welding flash hazards.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> Observation. Interview workshop personnel on the use of protective welding screens.</p>
6.8	Welding fume extraction facilities are provided and used.	<p><b>Intent:</b> To ensure that hazardous welding fumes can be extracted from the workshop.</p> <p><b>Personnel:</b> N/A.</p> <p><b>Method:</b> Observation. Interview workshop personnel to determine the use of fume extraction equipment.</p>

6.9	Flashback arrestors are adequately sized and fitted to portable and mobile oxy-fuel gas systems for welding, cutting and heating metal.	<p><b>Intent:</b> To ensure that the potential for a flashback is minimised.</p> <p><b>Personnel:</b> N/A.</p> <p><b>Method:</b> Observation. Check that flashback arrestors are fitted to each end of the hoses when using pressurised oxygen with a fuel gas. Note: This does not apply to a fuel gas cylinder that is used with atmospheric air. Flashback arrestors must be of correct type and size recommended by the manufacturer. A reference is AS 4603 for guidance on markings and types of flashback arrestors.</p>
6.10	Gas equipment hoses are not excessive in length and are free from damage.	<p><b>Intent:</b> To ensure that gas hoses are safe for use.</p> <p><b>Personnel:</b> N/A.</p> <p><b>Method:</b> Observation. So far as is practicable, hose length should not be greater than 15m. Ideally, the operator of the handheld equipment should be in sight of the supply cylinders. Refer to AS 4839-2001 section 6.5.</p>
6.11	Gauges, handpieces and associated accessories for gases are not damaged.	<p><b>Intent:</b> To ensure that gas equipment is in good condition and free from damage likely to result in gas leaks.</p> <p><b>Personnel:</b> N/A.</p> <p><b>Method:</b> Observation.</p>
6.12	Cylinders for different gases are stored separately.	<p><b>Intent:</b> To ensure that oxidising gases are stored separately to flammable gases (Reference AS 1596 section 5.6.1(c)).</p> <p><b>Personnel:</b> N/A.</p> <p><b>Method:</b> Observation.</p>

6.13	All gas cylinders are restrained.	<p><b>Intent:</b> To ensure that cylinders containing gases are restrained during use, transport and storage (AS 2030.1, section 10.5 and 10.6).</p> <p><b>Personnel:</b> N/A.</p> <p><b>Method:</b> Observation.</p>
6.14	To ensure that there is minimum risk of damage to gas cylinders. Gas cylinders, including manifold packs, are stored such as to minimise impact damage.	<p><b>Intent:</b> To ensure that there is minimum risk of damage to gas cylinders.</p> <p><b>Personnel:</b> N/A.</p> <p><b>Method:</b> Observation.</p>
6.15	Hot work procedures are in use.	<p><b>Intent:</b> To ensure that the hazards of hot work are always taken into account.</p> <p><b>Personnel:</b> Workshop supervisor. Welders.</p> <p><b>Method:</b> Interview personnel.</p>
6.16	MSDS for welding consumables are current and readily accessible.	<p><b>Intent:</b> To ensure personnel have safety information available.</p> <p><b>Personnel:</b> Welders.</p> <p><b>Method:</b> Interview personnel.</p>

## 7 Temporary work structures

### Temporary work structures

Point	Standard	Guideline
7.1	Where temporary work structures are used the structures are engineered for the intended work and incorporate fall prevention means.	<p><b>Intent:</b> To ensure that temporary work structures for accessing large mobile plant are designed and built to the best engineering and safety principles.</p> <p><b>Personnel:</b> Workshop supervisor.</p> <p><b>Method:</b> View design documents, supplier's literature etc. Interview workshop supervisor to determine if hazards have been addressed. Refer to MSIR 6.3.</p>
7.2	Temporary work structures are inspected for damage and repairs are in accordance with design principles.	<p><b>Intent:</b> To ensure that repairs to temporary work structures are satisfactory.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> View inspection documents. Interview workshop personnel to determine if temporary work structures are inspected and repaired.</p>
7.3	Temporary work structures incorporating scaffolding are erected by competent persons.	<p><b>Intent:</b> To ensure that temporary work structures incorporating scaffolding are safe for use.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> Interview personnel.</p>

## 8 Equipment for servicing mobile plant

### Equipment for servicing mobile plant

Point	Standard	Guideline
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8.1	Wheel chocks are provided and used at the workshop.	<p><b>Intent:</b> To ensure that equipment can be safely parked before being worked on.</p> <p><b>Personnel:</b> N/A.</p> <p><b>Method:</b> Observation. Interview workshop personnel to determine if wheel chocks are used at all times.</p>
8.2	Jacking equipment used in the workshop is load rated and maintained.	<p><b>Intent:</b> To ensure that stationary and mobile jacking equipment is safe for use.</p> <p><b>Personnel:</b> Workshop personnel. Supervisor.</p> <p><b>Method:</b> View documentation to show that inspection and maintenance of jacking equipment is done. Observe condition of jacking equipment.</p>
8.3	Purpose designed vehicle stands are used in the workshop.	<p><b>Intent:</b> To ensure that vehicle stands are used in place of sundry blocking items to support vehicles.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> Observation. Interview workshop personnel to determine what methods are used for supporting vehicles to be worked on.</p>
8.4	Vehicle stands are inspected and maintained.	<p><b>Intent:</b> To ensure that vehicle stands are safe for use.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> Observation. View documents indicating that inspection and maintenance has been carried out on vehicle stands.</p>

8.5	Training is provided on the safe use of jacking equipment and the use of equipment supports.	<p><b>Intent:</b> To ensure that persons who use jacking and support equipment are trained and aware of the hazards that can occur with incorrect use.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> View training records. Interview workshop personnel to determine what training has been given for the safe use of jacking and support equipment. Refer to MSIR 4.13.</p>
8.6	Vehicle hoists are load rated and maintained.	<p><b>Intent:</b> To ensure that vehicle hoists are safe for use.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> Observation. View hoist records to determine maintenance frequency.</p>
8.7	Persons are trained to use vehicle hoists.	<p><b>Intent:</b> To ensure that persons using a vehicle hoist are trained and are aware of the hazards that can occur with incorrect use.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> View training records. Interview personnel.</p>

## 9 Tyre handling and inflation

### Tyre handling and inflation

Point	Standard	Guideline
9.1	Large mobile equipment tyres are handled using machinery designed for the purpose.	<p><b>Intent:</b> To ensure that large tyres can be safely handled.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> View equipment. Interview workshop personnel on the use of mechanical tyre handling and fitting equipment.</p>
9.2	Size permitting, a tyre restraining device is used for the safe inflation of tyres.	<p><b>Intent:</b> To ensure that tyres can be safely inflated.</p> <p><b>Personnel:</b> N/A.</p> <p><b>Method:</b> Observation. Typical restraining device is a tyre cage. Check that suitable documented procedures are available and training is provided to operatives. Useful references are DMIRS Significant Incident Reports 5, 72, 83, and 124; and Mines Safety Bulletin 36.</p>
9.3	A stand-off inflation device is used to protect persons while inflating off-the-road earthmover size tyres.	<p><b>Intent:</b> To ensure that large earthmovers are inflated in a safe manner.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> Observation. Interview workshop personnel to determine if a stand-off inflation device is used when tyres are inflated. Tyre pressure should be continuously monitored via a suitably scaled gauge from a safe distance. Refer to AS 4457.1 – 2007 Earth-moving machinery – Off-the-road wheels, rims, and tyres – Maintenance and repair – Wheel assemblies and rim assemblies.</p>
9.4	Tyre inflation equipment, including pressure gauges, is not damaged.	<p><b>Intent:</b> To ensure that air hose fittings and gauges can be safely used.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> Observation. Interview workshop personnel to determine if hoses and gauges used are in good condition.</p>



9.5	Where inert gases are used for tyre inflation then deflation and inflation is carried out in a well ventilated area.	<p><b>Intent:</b> To minimise potential hazards to persons.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> Observation. View signage. Interview personnel.</p>
9.6	Persons are trained in the safe mounting and dismounting of tyres and rims and in the inflation of tyres.	<p><b>Intent:</b> To ensure that persons can carry out all work associated with tyres in a safe manner.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> View training documents. Interview workshop personnel on what training has been provided. Refer to MSIR 4.13.</p>

## 10 Tools

### Tools

Point	Standard	Guideline
10.1	Provision is made for the storage of portable power and hand tools.	<p><b>Intent:</b> To ensure that portable tools are stored safely in a designated area when not in use.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> Observation. Interview workshop personnel.</p>
10.2	Electrical power tools and extension leads are periodically inspected and tagged.	<p><b>Intent:</b> To verify that electrical power tools and extension leads are safe for use.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> View electrical records and check tags. Refer to MSIR 5.27(2).</p>
10.3	Tools are regularly inspected and removed from use if damaged by attaching "Out of service" tags.	<p><b>Intent:</b> To ensure that tools are safe for use.</p> <p><b>Personnel:</b> Workshop personnel. Supervisor.</p> <p><b>Method:</b> View documents showing repairs carried out to workshop tools.</p>
10.4	Onsite manufactured tools, provided for use in the workshop, have been designed to an engineering standard.	<p><b>Intent:</b> To ensure that the tools provided are safe for the work to be done.</p> <p><b>Personnel:</b> Workshop manager. Engineer.</p> <p><b>Method:</b> View design drawings. Interview workshop personnel.</p>
10.5	Training is provided in the safe use of tools, especially where unsafe use could prove hazardous to the user.	<p><b>Intent:</b> To ensure that tools are used by certified tradesmen or persons trained to use them safely.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> View training records. Interview workshop personnel in the training they have obtained. Refer to MSIR 4.13.</p>

10.6

The use of hand tools under high loads, such as manual torque multipliers, should be subject to strict control in regard to need, instructions for use and correct maintenance.

**Intent:**

To ensure that persons are not exposed to risk from manual tooling that is under high loading.

**Personnel:**

Workshop manager.

**Method:**

Interview. Refer to SIR 133.

# 11 Personal protective equipment

## Personal protective equipment

Point	Standard	Guideline
11.1	Signs are displayed requiring the wearing of the PPE specific to the work function.	<p><b>Intent:</b> To ensure that personnel are advised as to the PPE requirements.</p> <p><b>Personnel:</b> Workshop personnel. Safety officer.</p> <p><b>Method:</b> Observation. Interview safety officer and workshop personnel as to the PPE provided.</p>
11.2	The selected PPE required to be used in the workshop is provided, used and maintained.	<p><b>Intent:</b> To ensure that personnel can work safely.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> Observation. Interview workshop personnel as to the PPE provided.</p>
11.3	Storage facilities are provided for the PPE not currently in use.	<p><b>Intent:</b> To ensure that the PPE is correctly stored.</p> <p><b>Personnel:</b> Workshop personnel.</p> <p><b>Method:</b> Observation. Interview workshop as to what storage facilities are provided for the PPE.</p>
11.4	PPE requirements are periodically reviewed.	<p><b>Intent:</b> To ensure that the PPE is the best suited to the hazard.</p> <p><b>Personnel:</b> Registered manager, workshop personnel, safety and health representatives.</p> <p><b>Method:</b> Sight review documents such as JSAs and SWPs. Interview workshop personnel/manager on the periodic upgrading of the PPE. A useful reference is Standards Australia HB9-1994 Handbook – Occupational personal protection.</p>