



# Safe Systems of Work Guidelines for Volunteers

Operating Plant and Equipment



**Plan owner:**  
Motorsport Australia

**Application:**  
[Insert track locations]

**Event location and dates:**  
[Insert]

**Stakeholders:**  
Management and volunteers

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# Contents

<b>Section 1. General Information</b>	<b>4</b>
1.1 Purpose	4
1.2 Scope	4
1.3 Disclaimer	4
1.4 Integration with Other Plans and Systems	4
1.5 Consultation	4
1.6 Safe Systems of Work Induction	5
1.7 Roles and Responsibilities	5
1.8 Review and Document Control	5
1.9 Key Contacts	5
1.10 Regulatory Contacts	6
<b>Section 2. Risk Management</b>	<b>7</b>
2.1 Health and Safety Policy Commitments	7
2.2 Risk Management	7
2.3 Hierarchy of Control	7
2.4 Risk Assessment	8
2.5 Generic Risk Areas and Control Considerations	10
2.6 Legal and Compliance References	11
<b>Section 3. Safe System of Work Guidelines</b>	<b>12</b>
3.1 Safe System of Work Guide - Tractor	12
3.2 Safe System of Work Guide – Attachments	14
3.3 Safe System of Work Guide – Ride on Mower	16
3.4 Safe System of Work Guide – Manual Handling	18
3.5 Safe System of Work Guide – Maintenance	19
<b>Section 4. Templates and Checklists</b>	<b>20</b>
4.1 Induction Register	20
4.2 Tractor Inspection Checklist	21
4.3 Ride On Mower Inspection Checklist	23
4.4 Risk Assessment Template	25

# Section 1. General Information

## 1.1 Purpose

This document has been developed to provide guidance to motorsport clubs and affiliates on establishing and implementing safe systems of work with volunteers.

This document specifically relates to safe systems of work for volunteers who operate plant and equipment for track maintenance or related operations.

This system may be used in conjunction with existing safe systems of work to induct volunteers and other relevant stakeholders on the safe systems of work for plant and equipment.

## 1.2 Scope

The safe systems of work guidelines applies to management and volunteers who operate plant and equipment for track maintenance or related operations.

## 1.3 Disclaimer

This document provides generic guidelines for addressing common hazards and risks associated with operating plant and equipment. It is expected that clubs and affiliates and any other user of this document complete a risk assessment and ensure that safe systems of work are aligned to regulatory and manufacturers requirements.

Care has been taken in the production of this document and the information contained within. No liability will be accepted for any errors or omissions or any losses incurred by anyone who relies on or uses this document.

## 1.4 Integration with Other Plans and Systems

This plan is intended to be integrated and implemented with the following plans, supporting systems and resources:

- [MOTORSPORT Australia Risk Management Framework Policy](#)
- [MOTORSPORT Australia Safety First Documentation and Resources](#)
- [MOTORSPORT Australia Return to Race \(COVID-19\)](#)
- [MOTORSPORT Australia Permit Compliance Documentation and Resources](#)
- [Targeted Risk Assessment Templates and Guidelines](#)
- [National Competition Rules](#)
- [Tribunals and Judicial Procedures](#)
- [General Regulations](#)

Refer to the [MOTORSPORT Australia](#) website for all motorsport and event related resources.

## 1.5 Consultation

Volunteers and other relevant stakeholders should be consulted when developing, reviewing or modifying safe systems of work including policies, procedures and risk assessments.

Consultation may occur through a number of means including planning meetings, training, risk assessments, briefings and toolbox talks.

## 1.6 Safe Systems of Work Induction

Volunteers and other relevant stakeholders should be trained and inducted on the applicable safe systems of work and risk assessment. A register may be used to document induction records, refer to [Section 5](#).

## 1.7 Roles and Responsibilities

Roles	Responsibilities
<b>Management</b>	<p>Management are responsible for ensuring that:</p> <ul style="list-style-type: none"> <li>• A risk assessment is completed for the operation of plant and equipment</li> <li>• Safe systems of work are aligned to regulatory and manufacturers requirements</li> <li>• Volunteers and other stakeholders are consulted</li> <li>• Volunteers and other stakeholders are trained on the safe systems of work</li> <li>• Volunteers and other stakeholders hold the appropriate licences (where required)</li> <li>• Safe systems of work are periodically inspected, reviewed and updated</li> <li>• Safe systems or work are reviewed post an incident or unsafe act</li> </ul>
<b>Volunteers</b>	<p>Volunteers are responsible for ensuring that:</p> <ul style="list-style-type: none"> <li>• Input and participation occurs for the development and review of safe systems of work</li> <li>• Safe systems of work are followed and complied with</li> <li>• Reasonable care is taken for their own safety and the safety of others</li> <li>• Hazards and incidents are reported to management</li> </ul>

## 1.8 Review and Document Control

This document will be subject to review every 12 months or in the event of legislative changes, serious incident or process improvement initiatives.

Revision No	Date	Comments and Change References	Revised By
V1	[Insert]	[Insert]	[Insert]

## 1.9 Key Contacts

The following table details the key contacts relevant to this document.

Key Contact	Number	Email
[Insert]	[Insert]	[Insert]

## 1.10 Regulatory Contacts

The following table details State and Territory health and safety regulatory contacts.

State and Territory Regulator	Number	Email
<a href="#">SafeWork NSW</a>	13 10 50	<a href="mailto:contact@safework.nsw.gov.au">contact@safework.nsw.gov.au</a>
<a href="#">Workplace Health and Safety Queensland</a>	1300 362 128	<a href="#">Online enquiry form</a>
<a href="#">WorkSafe Victoria</a>	1800 136 089	<a href="mailto:info@worksafe.vic.gov.au">info@worksafe.vic.gov.au</a>
<a href="#">WorkSafe ACT</a>	(02) 6207 3000	<a href="mailto:worksafe@act.gov.au">worksafe@act.gov.au</a>
<a href="#">SafeWork SA</a>	1300 365 255	<a href="mailto:help.safework@sa.gov.au">help.safework@sa.gov.au</a>
<a href="#">NT WorkSafe</a>	1800 019 115	<a href="mailto:safetyadvice@nt.gov.au">safetyadvice@nt.gov.au</a>
<a href="#">WorkSafe WA</a>	1300 307 877	<a href="mailto:safety@dmirs.wa.gov.au">safety@dmirs.wa.gov.au</a>
<a href="#">WorkSafe Tasmania</a>	(03) 6166 4600	<a href="mailto:wstinfo@justice.tas.gov.au">wstinfo@justice.tas.gov.au</a>

# Section 2. Risk Management

## 2.1 Health and Safety Policy Commitments

The user of this guideline is committed to establishing and maintaining a safe and healthy workplace which is free from harm.

This commitment requires that all reasonably practicable measures are taken to eliminate or minimise health and safety risks.

Specific commitments include but are not limited to:

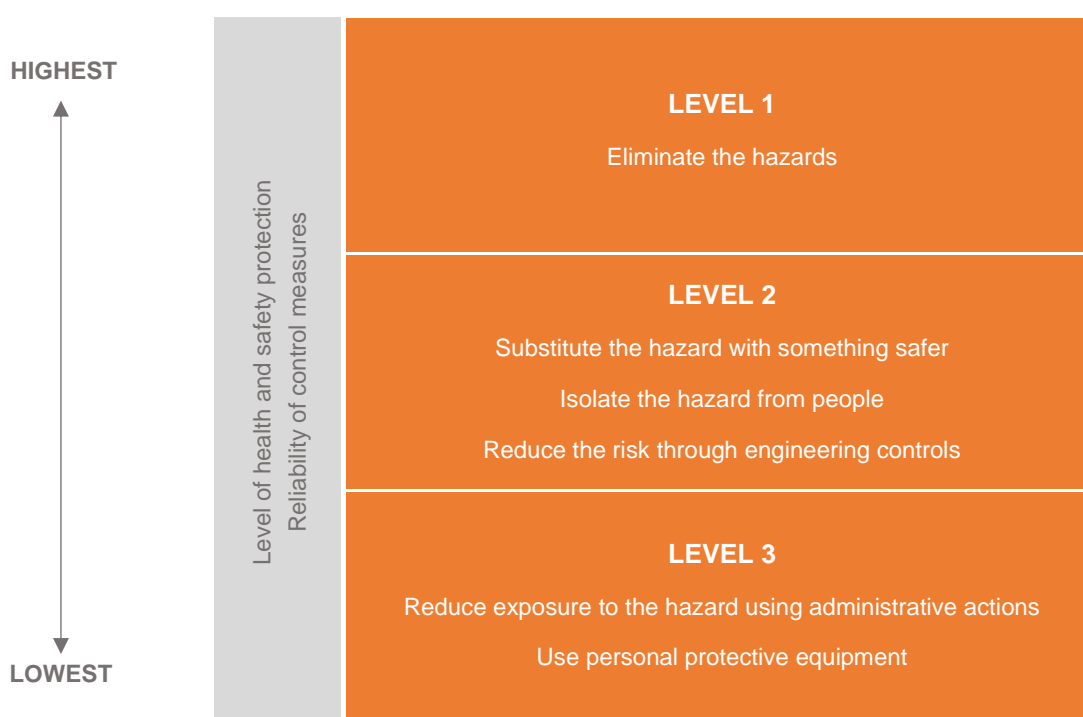
- Consulting with volunteers on health and safety matters;
- Conducting risk assessments and implementing safe systems of work;
- Communicating health and safety roles, responsibilities and compliance requirements;
- Demonstrating proactive safety behaviours and following safe systems of work;
- Providing and maintaining safe plant and equipment;
- Providing appropriate information, instruction and training to work safely;
- Providing adequate support and supervision;
- Establishing processes for issue and incident reporting and management;
- Establishing processes for review and continuous improvement of safe systems of work; and
- Working safely and in accordance with regulatory and compliance requirements.

## 2.2 Risk Management

The following risk assessment methodology provides guidance on applying a structured risk management approach when developing and implementing safe systems of work.

## 2.3 Hierarchy of Control

The hierarchy of control is used in risk assessment processes to ensure that the highest practical level of protection and safety is selected.



Health and safety legislation requires duty holders to apply the hierarchy of controls when treating or controlling health and safety risks.

The hierarchy of controls ranks the types of control methods from the highest level of protection and reliability to the lowest. It's a step-by-step approach to eliminating or reducing risks.

**LEVEL 1 controls** eliminate the hazard, removing the risk completely. An example may be to eliminate the risk of a fall from height by doing the work at ground level.

**LEVEL 2 controls** eliminate as many of the risks associated with the hazard as possible. These controls include:

- Substituting the hazard for something safer (e.g. hazardous chemicals to non-hazardous);
- Isolating the hazard by physically separating people (e.g. installing rails around edges); and
- Using engineering controls (e.g. trolleys, hoists and safety switches).

**LEVEL 3 controls** rely on human behaviour and supervision which are the least effective ways to reduce risk. Level 3 controls should be used as a last resort or in addition to other control measures. These controls include:

- Setting up administrative processes such as procedures, rules and warning signs; and
- Using personal protective equipment such as ear muffs, respirators or protective eye wear.

The hierarchy of risk controls for health and safety should be applied to risk assessments and work activities.

## 2.4 Risk Assessment

The risk analysis and evaluation process (risk assessment) involves an assessment of the identified risks which considers the likelihood and consequence of the risk being realised.

### Risk Likelihood:

Risk likelihood is the identified probability or frequency of a risk event occurring or being realised.

Likelihood	
Item	Description
1 – Almost Certain	Action will probably occur numerous times or in many circumstances
2 – Likely	Action may occur occasionally or in some circumstances
3 – Possible	Action may occur in exceptional circumstances and has been known to occur elsewhere
4 – Unlikely	Whilst theoretically possible is not known to have occurred
5 – Rare	Whilst theoretically possible is not known to have occurred



### Risk Consequence:

Risk consequence is the identified outcome or impact of an event occurring if a risk is realised.

Consequence	
Item	Description
5 – Extreme Consequence	Death or environment effect with significant impact
4 – Major Consequence	Permanent disability, health issue or environment effect with impact
3 – Moderate Consequence	Medical treatment or environment effect requiring assistance
2 – Minor Consequence	First aid treatment or environment effect contained internally
1 – Insignificant Consequence	No injuries, health or environment effect

### Risk Assessment Matrix:

Risk assessment matrix is used to assess the risk score using the likelihood and consequence risk criteria.

		Consequence				
		1	2	3	4	5
Likelihood		<b>Insignificant</b> No injuries, health or environment effect	<b>Minor</b> First aid treatment or environment effect contained internally	<b>Moderate</b> Medical treatment or environment effect requiring assistance	<b>Major</b> Permanent disability, health issue or environment effect with impact	<b>Extreme</b> Death or environment effect with significant impact
5	<b>Almost certain</b> The event is expected to occur in most circumstances	Moderate	High	Extreme	Extreme	Extreme
4	<b>Likely</b> The event will probably occur in most circumstances	Moderate	Moderate	High	Extreme	Extreme
3	<b>Possible</b> The event may occur sometime	Low	Moderate	High	High	Extreme
2	<b>Unlikely</b> The event could occur sometime	Low	Low	Moderate	High	High
1	<b>Rare</b> The event may occur in exceptional circumstances	Low	Low	Low	Moderate	Moderate

## Risk Actions:

Risk actions including escalation, management and monitoring will be determined by the risk assessment.

Risk Actions (required following the assessment of risk)	
Risk	Actions
Extreme risk	Intolerable, immediate senior management actions required
High risk	Tolerable with robust controls and management oversight
Medium risk	Tolerable with controls and ongoing management review
Low risk	Acceptable with periodic review

Refer to [Section 5.4](#) for a risk assessment template.

## 2.5 Generic Risk Areas and Control Considerations

Generic risk areas and control considerations associated with use of plant and equipment include:

Risk areas	Control considerations
Work activity risks and work area protection	<ul style="list-style-type: none"> <li>• Inspection of work areas and identification of risks</li> <li>• Identify and control overhead risks (structures and powerlines)</li> <li>• Identify and control underground risks (utilities / dial before you dig for attachments)</li> <li>• Identify and control people risks (access control and work area protection)</li> <li>• Identify and control terrain risks (designated travel paths / avoid slopes)</li> <li>• Identify and control working alone risks (communication equipment and protocols)</li> </ul>
Operating plant and equipment	<ul style="list-style-type: none"> <li>• Trained and competent operators</li> <li>• Operators are fit for duty</li> <li>• People and plant segregation and management</li> <li>• Controlled movements and low speed operations</li> <li>• Clear line of sight during work operations</li> <li>• Operating in accordance with manufacturers requirements and safe systems of work</li> </ul>
Changing and operating attachments	<ul style="list-style-type: none"> <li>• Trained and competent operators</li> <li>• Isolation / securing of plant and equipment prior to connecting attachments</li> <li>• Connection / fitting attachments only on a level ground / area</li> <li>• Securing attachments</li> <li>• Operating in accordance with manufacturers requirements and safe systems of work</li> </ul>
Refuelling	<ul style="list-style-type: none"> <li>• Designated fuelling areas</li> <li>• Isolation / securing of plant and equipment</li> <li>• No smoking or fuelling near sources of ignition</li> <li>• Access to safety data sheets and protective equipment</li> <li>• Access to spill containment / control equipment</li> </ul>
Maintenance	<ul style="list-style-type: none"> <li>• Pre-operational inspections of plant and equipment</li> <li>• Regular maintenance in line with manufacturers requirements</li> <li>• Tag out / isolation of damaged or faulty plant and equipment</li> <li>• Trained and competent maintenance personnel</li> </ul>
Personal protective equipment	<ul style="list-style-type: none"> <li>• Improved visibility or high visibility clothing</li> <li>• Sun protection</li> <li>• Work boots (enclosed and capped)</li> <li>• Hearing protection (as required)</li> <li>• Eye protection (as required)</li> <li>• Gloves / hand protection (as required)</li> </ul>

## 2.6 Legal and Compliance References

The following legal and compliance requirements should be considered when developing safe systems of work:

Type	Applicability	References
Legislation	NSW	<ul style="list-style-type: none"> <li>Work Health and Safety Act 2011</li> <li>Work Health and Safety Regulations 2017</li> </ul>
Legislation	QLD	<ul style="list-style-type: none"> <li>Work Health and Safety Act 2011</li> <li>Work Health and Safety Regulations 2011</li> </ul>
Legislation	VIC	<ul style="list-style-type: none"> <li>Occupational Health and Safety Act 2004</li> <li>Occupational Health and Safety Regulations 2017</li> </ul>
Legislation	ACT	<ul style="list-style-type: none"> <li>Work Health and Safety Act 2011</li> <li>Work Health and Safety Regulations 2011</li> </ul>
Legislation	SA	<ul style="list-style-type: none"> <li>Work Health and Safety Act 2012</li> <li>Work Health and Safety Regulations 2012</li> </ul>
Legislation	NT	<ul style="list-style-type: none"> <li>Work Health and Safety (National Uniform Legislation) Act 2011</li> <li>Work Health and Safety (National Uniform Legislation) Regulations 2011</li> </ul>
Legislation	WA	<ul style="list-style-type: none"> <li>Occupational Safety and Health Act 1984</li> <li>Occupational Safety and Health Regulations 1996</li> </ul>
Legislation	TAS	<ul style="list-style-type: none"> <li>Work Health and Safety Act 2012</li> <li>Work Health and Safety Regulations 2012</li> </ul>
Standard	National	<ul style="list-style-type: none"> <li>ISO 31000 Risk Management Guidelines</li> </ul>
Specific guidance	VIC	<ul style="list-style-type: none"> <li><a href="#">Safe use of tractors and attachments</a></li> </ul>

\*Refer to the respective State and Territory Regulator for supporting codes and guidelines.

Other sources for health and safety legal and other requirements include but are not limited to:

State and Territory Regulator	Number	Email
Harmonised Act, Regulations and Guidance material	Safe Work Australia	<a href="https://www.safeworkaustralia.gov.au/">https://www.safeworkaustralia.gov.au/</a>
Standards	SAI Global	<a href="https://www.saiglobal.com/">https://www.saiglobal.com/</a>
Standards	Standards Australia	<a href="https://www.standards.org.au/">https://www.standards.org.au/</a>
Safety news, alerts and updates	OHS Alert	<a href="https://www.ohsalert.com.au/">https://www.ohsalert.com.au/</a>
Manufacturers specifications, safe handling and operating procedures	Plant, equipment and chemical suppliers	-
Health and safety consultation forums	Industry groups, safety institute of Australia, insurers and social media	-

## Section 3. Safe System of Work Guidelines

Section 3 provides generic guidance and does not cover all possible hazards and risks. It should be used in conjunction with a risk assessment, training, manufacturers requirements and other relevant references.

### 3.1 Safe System of Work Guide - Tractor

A safe system of work should be established to eliminate or reduce the risks associated with operating a tractor to a reasonable level.

#### Potential Hazards and Risks:

- Contact, crush or entanglement with moving parts
- Impact with people, plant and structures
- Rollover
- Noise
- Refuelling chemical and fire risk exposures
- Mechanical failure
- Unsafe acts and operations

#### Personal Protective Equipment:



Foot protection must be worn



Protective clothing must be worn



Hearing and eye protection must be worn



Sun protection must be worn

#### Pre-Operational Checks:

- Check that the maintenance information, tags or stickers are in date
- Check that all guards are in place, functional and secured
- Check the roll over protective structure (ROPS) is in sound condition and secured
- Check the power take-off (PTO) guard is in place and in sound condition
- Check the fluids including oil, hydraulics, fuel and coolant
- Check the hitch and frame for signs of wear or damage such as cracks
- Check the hydraulic rams, hoses and couplings for signs of wear, damage and leaks
- Check all tyres for wear or damage and pressure
- Check that hitch points, equipment and safety chains are secured
- Check the lights and warning devices are in working order
- Check the seatbelt is in working order
- Check the work areas for contact and impact hazards and establish safe travel paths

#### Safe Operating Procedures:

- Fit attachments according to the manufacturer's instructions
- Enter and exit the tractor using 3 points of contact

- Ensure that all operational levers are in their neutral position, the clutch and power take-off are disengaged and the parking brake is applied
- Adjust seating and activate the warning lights
- Start the tractor only from the driving position and not from the ground
- Ensure that pedals, operational controls and brakes are in working order
- When reversing up to an implement, ensure a clear line of sight and exclusion zone is maintained
- Drive the tractor at slow speeds in order to maintain control in unexpected circumstances
- Reduce speed before turning or applying brakes
- Watch out for ditches, embankments and depressions which can cause overturns
- Reverse up steep slopes rather than driving forward and ensure no trailing implements are attached
- Use as wide a wheel track as possible when working on sloping ground and hill sides
- Descend slopes cautiously and keep the tractor in low gear to allow the motor to act as a brake
- If stuck in soft ground, reverse out or call for help if this is unsuccessful
- Watch out for pedestrians and exercise caution at all times when operating the tractor

#### **Post-Operational Actions:**

- Park the tractor in a safe area, on even ground
- Place all control levers in neutral position, apply the park brake, turn of the ignition and remove keys
- Clean all machinery and grease relevant components as per the manufacturer's instructions

#### **Warning:**

- Ensure operators are trained and competent
- Only use the tractor for the purpose it was designed and follow the manufacturer's instructions
- Only use implements that meet the manufacturer's recommendations
- Keep children away from tractors and machinery
- Never hitch above the centre-line of the rear axle, around the axle housing or to the top link pin
- Do not use damaged or faulty equipment
- Do not carry passengers unless there is a designated seat with a working seatbelt
- Do not attempt to adjust or work on implements while they are in motion
- Do not dismount from a moving tractor
- Do not park the tractor on a steep slope
- Do not use or idle in poorly ventilated areas
- Do not operate on unsafe or steep terrain

## 3.2 Safe System of Work Guide – Attachments

A safe system of work should be established to eliminate or reduce the risks associated with fitting and operating tractor attachments to a reasonable level.

### Potential Hazards and Risks:

- Contact, crush or entanglement with moving parts
- Impact with people, plant and structures
- Noise
- Mechanical failure
- Unsafe acts and operations

### Personal Protective Equipment:



Foot protection must be worn



Protective clothing must be worn



Hearing and eye protection must be worn



Sun protection must be worn

### Pre-Operational Checks:

- Check that the maintenance information, tags or stickers are in date
- Check that all guards are in place, functional and secured
- Check the fluids including oil, hydraulics, fuel and coolant (if applicable)
- Check the hitch and frame for signs of wear or damage such as cracks
- Check the hydraulics, hoses and couplings for signs of wear, damage and leaks
- Check that hitch points, equipment and safety chains are secured
- Check for overhead hazards and underground hazards (if raising or penetrating the ground)

### Safe Operating Procedures:

#### Connecting Attachment

- Fit attachments according to the manufacturer's instructions
- Ensure the attachment is on a flat and level ground
- Locate the joystick for operation of the hydraulics on the loader arms and use the joystick to test movement of loader arms and tilt operations
- Drive up to the attachment slowly and lower arms down to same height and give a slight crowd angle
- Lift and align loader arms on loader onto top securing lugs of attachment and lift up and crowd back arms to allow attachment to enter bottom securing position
- Lift loader slightly off the ground, apply hand brake, put tractor in neutral and turn off
- Manually insert locking pins and secure safety chain

#### General Operations

- Ensure overhead and underground assets are identified and associated risks controlled (obtain a dial before you dig for ground penetration works)
- Raise all implements to correct clearance height for travelling to job site (no more than a metre off the ground)
- Ensure raised attachment does not impede view of operator while moving

- If forward view is restricted then travel in reverse
- Ensure that all locking devices are in place when moving
- Survey the area to be worked by making sure that there are no water pipes, trees, buildings, power lines or other obstacles in the work site
- Check slope of the land to ensure vehicle is safe from roll over and clear area of obvious hazards
- Clear area of people
- Always work slowly and carefully
- Always look over both shoulders when reversing
- Always drive slowly when the attachment is full of material

#### Front End Loader

- Drive in slowly into pile of material and do not spin the wheels
- Do not exceed the safe working limit (SWL) of the front end loader (SWL is found on loader lift arms)
- Ensure the bucket is level with the ground, proceed into material and crown bucket back to capture the material
- Once the bucket is full, check over both shoulders for any dangers then reverse
- Make sure the bucket is as low as possible without hitting the ground.
- Never drive with the bucket raised in the air
- Never reverse down a slope with a loaded bucket, keep the load as low as possible
- When tipping, ensure the work area is clear when lowering or lifting the bucket
- When stopping the tractor, park on level ground lower bucket to the ground
- Ensure bucket or forks are lowered to ground for storage

#### Post-Operational Actions:

- Park the tractor in a safe area, on even ground
- Apply the park brake
- Dismount and manually unlock pins safety latch on attachment
- Remount back into cab.
- Use the joy stick to crowd the attachment forward and down which will release the attachment
- Once detached back away from the attachment
- Place all control levers in neutral position, apply the park brake, turn of the ignition and remove keys
- Clean all machinery and grease relevant components as per the manufacturer's instructions

#### Warning:

- Ensure operators are trained and competent
- Only use the attachment for the purpose it was designed and follow the manufacturer's instructions
- Do not use damaged or faulty equipment
- Tractor can tip over if using tipping bucket and turning sharply or on uneven ground
- Do not attempt to adjust or work on implements while they are in motion
- Do not operate on or in unsafe conditions

### 3.3 Safe System of Work Guide – Ride on Mower

A safe system of work should be established to eliminate or reduce the risks associated with operating a ride on mower to a reasonable level.

#### Potential Hazards and Risks:

- Contact, crush or entanglement with moving parts
- Rapidly rotating cutting blades
- Impact with people, plant and structures
- Noise
- Ejected material and flying debris
- Refuelling chemical and fire risk exposures
- Mechanical failure
- Unsafe acts and operations

#### Personal Protective Equipment:



Foot protection must be worn



Protective clothing must be worn



Hearing and eye protection must be worn



Sun protection must be worn

#### Pre-Operational Checks:

- Check that the maintenance information, tags or stickers are in date
- Check that all guards are in place, functional and secured
- Check the fluids including oil, hydraulics, fuel and coolant
- Check all tyres for wear or damage and pressure
- Check the lights and warning devices are in working order
- Check the seatbelt is in working order
- Check that the cutting blades are sharp, secure and in good condition
- Check that pneumatic and hydraulic mechanisms are in sound condition
- Check that all electrical switches (including dead man's switch if fitted) are functioning
- Check the work areas for contact and impact hazards and establish safe travel paths

#### Safe Operating Procedures:

- Enter and exit the mower using 3 points of contact
- Locate and ensure you are familiar with all machine operations and controls
- Adjust seating and secure seatbelt
- Ensure the transmission is out of gear and the mower blade clutch disengaged before starting
- Keep clear of moving machine parts
- Drive the mower at a slow speed in order to maintain control over unexpected hazards
- Reduce speed before turning or applying brakes
- Travel up and down slopes rather than across, taking extra care when ascending or descending steep slopes
- Watch out for ditches, embankments and depressions which can cause overturns
- Take care when refuelling to avoid spilling fuel onto hot motor or exhaust
- Before making adjustments, bring the machine to a complete standstill and isolate
- Watch for ejected material



- Ensure No Person Or Animal Is Endangered When Operating Equipment

**POST-OPERATIONAL ACTIONS:**

- Park the mower in a safe area and on even ground
- Stop the ride on mower and shift the gear selector to park position
- Raise and secure the cutting blades
- Lock the parking brake
- Stop the engine and remove the keys

**Warning:**

- Ensure operators are trained and competent
- Only use the mower for the purpose it was designed and follow the manufacturer's instructions
- Only use implements that meet the manufacturer's recommendations
- Keep children away from mowers and machinery
- Do not use damaged or faulty equipment
- Do not carry passengers
- Do not attempt to adjust or work on implements while they are in motion
- Do not dismount from a moving mower
- Do not park the mower on a steep slope
- Do not use or idle in poorly ventilated areas
- Do not operate on unsafe or steep terrain

### 3.4 Safe System of Work Guide – Manual Handling

A safe system of work should be established to eliminate or reduce the risks associated with manual handling to a reasonable level, particularly for heavy and repetitive manual handling activities.

#### Potential Hazards and Risks:

- Muscle and soft tissue injuries
- Tendon and ligament injuries
- Nerve, bone and disc injuries
- Injuries from falling objects
- Unsafe acts and operations

#### Personal Protective Equipment:



Foot protection must be worn



Protective clothing must be worn



Sun protection must be worn

#### Safe System of Work:

Manual handling practices are expected to occur on a daily basis, it is important that safe manual handling practices are adopted when moving an object by pushing, pulling, lifting and carrying.

The following safe systems of work may be considered for manual handling activities:

- Mechanical aids should always be considered where appropriate and applicable
- Store heavy items and materials as close to the ground as possible
- Before manually moving an object consider if it needs to be moved
- Assess the size and shape of the object and consider a two person lift (if no mechanical aid)
- Adopt safe manual handling techniques:
  - Ensure you have a secure grip
  - Bend at the knees and lift with legs
  - Keep your back as straight as possible
  - Keep the item close to your body
  - Avoid twisting and bending with the load
  - Do not carry heavy items over long distances
- For repetitive manual handling tasks, rotate the job and take regular breaks

Examples of mechanical aids:

- Lifting devices
- Trolleys
- Wheelbarrows
- Vehicles, plant and equipment

### 3.5 Safe System of Work Guide – Maintenance

Maintenance should be scheduled and planned. Always refer to the manufacturer's operation and maintenance manual for advice on the inspection and maintenance specification routine.

Ensure that a competent person carries out any maintenance tasks and a suitably qualified repairer carries out repairs.

It is essential to keep all service and maintenance records for the life of the plant and equipment so that this information can be produced when requested or passed on to the purchaser when sold.

Incidents can occur when maintenance is delayed beyond the manufacturer's specifications and maintenance schedule, creating a higher risk to the health and safety of the operator and incurring greater costs through the need to replace parts and components.

This can include the following:

- A poorly maintained tractor or other plant and equipment may not operate properly, (e.g. faulty brakes) which can interrupt normal tasks to conduct running maintenance (e.g. adding lubricant);
- Repairs may need to be performed in the field which in turn can present a new set of hazards that need to be managed. Ensure safe working procedures and safety equipment are used;
- When removing guarding or where other protective devices need to be removed for inspection and maintenance, ensure they are also inspected and replaced or repaired if damaged or worn. It is good practice to hinge or lanyard guards so they are not misplaced and always ensure plant and machinery is isolated;
- Ensure the plant and equipment and any attachments are in a clear area away from other people and obstacles;
- Ensure the plant and equipment and any attachments cannot be started during maintenance; for example, disable the battery connections;
- Ensure the wheels are chocked and the park brake is applied;
- Remove the key and leave it with the person performing the maintenance;
- Ensure hydraulic equipment is lowered to the ground; and
- If a tractor or other plant and equipment is being worked on and not to be used, it should be tagged out by removing the key and placing a tag on the tractor (e.g. on the steering wheel) stating that it has been tagged out for maintenance.

Regular inspections should be conducted to assist with identifying issues and maintenance needs, refer to [Section 5](#) for generic inspection checklists.



## 4.2 Tractor Inspection Checklist

This checklist provides generic guidance and does not cover all possible hazards and risks. It should be used in conjunction with a risk assessment, training, manufacturers requirements and other relevant references.

### General Details:

Completed by:		Date:	
Conducted by:			
Consultation with:			

### Inspection:

Operators	Assessment Complete?
Operators are trained and competent to operate the plant and equipment	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Operators are fit for duty and not impaired (fatigue, medication or other)	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Tractors	Assessment Complete?
All tractors are fitted with an approved Roll Over Protective Structure (ROPS) or cabin	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
All tractors fitted with a front-end loader or forklift, are fitted with a Falling Object Protection Structure (FOPS) or cabin	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
All tractor Power Take-Off (PTO) drive shafts are fitted with an undamaged PTO guard	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Tractor PTO Master Guards are in place and not damaged	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
PTO Implement (PIC) guard(s) are in place and not damaged	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
All other manufacturer's guards e. g. engine guards are in place	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Steps and handrails are undamaged and provide safe access	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Tractor access steps prevent the operator falling and being run-over by the tractor rear wheel or implement	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Mufflers and exhaust systems function properly	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Windscreens and rear vision mirrors are undamaged	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Headlights, tail lights, indicators and hazard lights are working (where relevant)	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Brakes, handbrakes and clutches are adjusted and functioning	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Tractor tyres are in suitable condition, correctly inflated and ballasted	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Hydraulic hoses and couplings are not worn, split or leaking oil	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Tractor seats are not broken, upholstery is undamaged	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Electrical wiring and switches are in good working condition	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Batteries are secure and terminals clean	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
All switches (including ignition switches) are working	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Windscreen wipers and washers work	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Doors close and seals are in good condition	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>

Attached Equipment	Assessment Complete?
All tractors are fitted with an approved Roll Over Protective Structure (ROPS) or cabin	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
All tractors fitted with a front-end loader or forklift, are fitted with a Falling Object Protection Structure (FOPS) or cabin	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
All tractor Power Take-Off (PTO) drive shafts are fitted with an undamaged PTO guard	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Tractor PTO Master Guards are in place and not damaged	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
PTO Implement (PIC) guard(s) are in place and not damaged	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Emergency Equipment	Assessment Complete?
A fire extinguisher is mounted on tractors	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
A portable First Aid kit is available	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Other	Assessment Complete?
	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>

**Corrective Actions:**

Actions	Responsibility	Timeline	Complete
			Yes <input type="checkbox"/> No <input type="checkbox"/>
			Yes <input type="checkbox"/> No <input type="checkbox"/>
			Yes <input type="checkbox"/> No <input type="checkbox"/>
			Yes <input type="checkbox"/> No <input type="checkbox"/>
			Yes <input type="checkbox"/> No <input type="checkbox"/>
			Yes <input type="checkbox"/> No <input type="checkbox"/>
			Yes <input type="checkbox"/> No <input type="checkbox"/>
			Yes <input type="checkbox"/> No <input type="checkbox"/>
			Yes <input type="checkbox"/> No <input type="checkbox"/>

### 4.3 Ride On Mower Inspection Checklist

This checklist provides generic guidance and does not cover all possible hazards and risks. It should be used in conjunction with a risk assessment, training, manufacturers requirements and other relevant references.

**General Details:**

Completed by:		Date:	
Conducted by:			
Consultation with:			

**Inspection:**

Operators	Assessment Complete?
Operators are trained and competent to operate the plant and equipment	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Operators are fit for duty and not impaired (fatigue, medication or other)	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Tractors	Assessment Complete?
Electrical switches and dead man switch are functioning	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
All guards are secure and operate correctly (check latches / locks and interlocks if fitted)	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Hydraulic or pneumatic systems are functional and V belts or gear mechanisms are guarded (if fitted)	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
The engine, gears, fuel and lubricating systems are as per manufacturer's specifications	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Hydraulic hoses and couplings are not worn, split or leaking oil	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Air filter is clear of debris, clean, and fit for use	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
The catcher if fitted is secure and functions correctly	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Tyres are in suitable condition and correctly inflated	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Personal protective equipment is available and in good condition	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
The seat and seat belt is in good condition and functions correctly	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Switch gear is free from damage such as cracks and broken push buttons	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Brakes, handbrakes and operational controls are functioning	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Equipment is free from excessive build-up of dirt, grass and oil around guards, engine and cutting blades	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Parts are well secured with no loose components or fixing	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
Emergency Equipment	Assessment Complete?
A fire extinguisher is mounted on tractors	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
A portable First Aid kit is available	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>

Other	Assessment Complete?
	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>
	Yes <input type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>

**Corrective Actions:**

Actions	Responsibility	Timeline	Complete
			Yes <input type="checkbox"/> No <input type="checkbox"/>
			Yes <input type="checkbox"/> No <input type="checkbox"/>
			Yes <input type="checkbox"/> No <input type="checkbox"/>
			Yes <input type="checkbox"/> No <input type="checkbox"/>
			Yes <input type="checkbox"/> No <input type="checkbox"/>
			Yes <input type="checkbox"/> No <input type="checkbox"/>
			Yes <input type="checkbox"/> No <input type="checkbox"/>
			Yes <input type="checkbox"/> No <input type="checkbox"/>
			Yes <input type="checkbox"/> No <input type="checkbox"/>



## 4.4 Risk Assessment Template

### General Details:

Name of Event:		Type of work being performed:  e.g. refuelling, grass cutting, moving materials
Event Venue:		
Date of Event:		

		Consequence				
		1	2	3	4	5
Likelihood		<b>Insignificant</b> No injuries, health or environment effect	<b>Minor</b> First aid treatment or environment effect contained internally	<b>Moderate</b> Medical treatment or environment effect requiring assistance	<b>Major</b> Permanent disability, health issue or environment effect with impact	<b>Extreme</b> Death or environment effect with significant impact
5	<b>Almost certain</b> The event is expected to occur in most circumstances	Moderate	High	Extreme	Extreme	Extreme
4	<b>Likely</b> The event will probably occur in most circumstances	Moderate	Moderate	High	Extreme	Extreme
3	<b>Possible</b> The event may occur sometime	Low	Moderate	High	High	Extreme
2	<b>Unlikely</b> The event could occur sometime	Low	Low	Moderate	High	High
1	<b>Rare</b> The event may occur in exceptional circumstances	Low	Low	Low	Moderate	Moderate

Actions Required Following the Assessment of Risk	
<b>Extreme risk:</b>	Intolerable risk requiring immediate senior management action to minimise risk.
<b>High risk:</b>	Tolerable risk with robust controls and closely monitored by management.
<b>Moderate risk:</b>	Tolerable with controls and ongoing management review.
<b>Low risk:</b>	Acceptable risk with periodic review.

Note: Management and officials are considered to be like terms.



**Risk Considerations:**

Common Causes of Harm:

- Slips, trips and falls
- Contact with overhead or underground assets
- Hazardous substances and dangerous goods
- Manual handling
- Plant and equipment

Risk Treatments:

- Avoid: Don't carry out the activity
- Treat: Reduce risk by implementing controls
- Accept: If the risk is assessed as low or tolerable
- Transfer: Insurance and joint responsibility (duty of care is not transferable)

Hierarchy of Controls:

- Eliminate the hazard
- Substitute to hazard
- Isolate the hazard
- Use engineering controls
- Use administrative controls
- Use personal protective equipment controls

**Risk Assessment:**

Assess the likelihood (L) and consequence (C) of the inherent risk score (before treatment) and residual risk score (after treatments) using the risk assessment matrix.

Description of Activity or Issue: What is the activity or issue	Risks: What could happen or go wrong	Inherent Risk: What is the risk before controls			Risk Treatments and Controls: How are the risks managed	Residual Risk: What is the risk after controls			Responsibility: Who is responsible
		L	C	Risk		L	C	Risk	

Description of Activity or Issue: What is the activity or issue	Risks: What could happen or go wrong	Inherent Risk: What is the risk before controls			Risk Treatments and Controls: How are the risks managed	Residual Risk: What is the risk after controls			Responsibility: Who is responsible
		L	C	Risk		L	C	Risk	



**Consultation and Review:**

All stakeholders involved in the activity must confirm that consultation and review of this risk assessment has occurred.

First Name	Last Name	Organisation	Date	Signature

**Completed By:**

Completed by:		Date:	
Signature:			

