



Pre-Start Meetings, Job Safety Analysis (JSA) and Safe Work Instructions (SWI) - Tractor and Machinery Operations STUDENT WORKBOOK

This resource has been developed by:



Contents

Student Worksheets

Worksheet 1		Page 3
Worksheet 2		Page 7

PIEFA's Storm and Flood Industry Recovery Program (SFIRP) is jointly funded by the Australian and NSW Governments under the Disaster Recovery Funding Arrangements. Although funding for this product has been provided by both Australian and NSW Governments, the material contained herein does not necessarily represent the views of either Government.



PIEFA

The leader in food and fibre education.



STORM & FLOOD INDUSTRY
RECOVERY PROGRAM

WORKSHEET 1:

Pre-Start Meeting - Job Safety Analysis (JSA)

WEEK COMMENCING:

START TIME:

SITE:

FINISH TIME:

MEETING CHAIRPERSON:

SIGNATURE:

CURRENT ENTERPRISE WORK PROGRAM

TIMING

- | | |
|---|---------------------|
| 1. New employee recruitment. | Completed last week |
| 2. New employee site and operations induction | Completed last week |

WEEKLY TASKS

- Signed receipt of enterprise policies and procedures**
Risk management, site safety training, emergency response, first aid response/trained officers, accident reporting, register of training currency, WHS committee, WHS meeting schedule, general reporting procedures.
- Site orientation and safety tour.
- Outline roles and responsibilities of team
- Operations:**
Safe Work Method Statement (SWMS - High risk only), Safe Work Instructions (SWI) and Take 5 assessments, Vehicle Log Books and Verification of Competency (VOC)
- Safe Work Instruction (SWI) - Tractors and Machinery

This resource has been developed by:

General Risk Management

SITE SPECIFIC HAZARDS	CONTROL MEASURES
1. Uneven/wet terrain	Monitor weather. Undertake Take 5 assessments on vehicles. Keep vehicles on roads/level surfaces. Avoid ditches/slopes. Use seat belts/safety boots.
2. Weather - heat	Schedule timing of outdoor activities. Rotate tasks to avoid fatigue. Seek shelter during the middle of the day. Use a buddy system to check on team members. Ensure covered clothing, water, hat and sunscreen.
3. Insect bites/plant toxins, snakes	Use Insect repellent. Avoid vegetation if infested with toxic weeds e.g. Green Cestrum. Take care and use PPE. Maintain personal hygiene and awareness of snakes/spiders/insects. Check and maintain a first aid kit.
4. Manual handling	Use PPE - Gloves. Substitute heavy lifting with machinery. Use buddy systems. Use tools/aides and suitable equipment. Follow the correct lifting technique.
5. Powered/manual tools	Read the manual. Check cables/guards. Consider ergonomics. Rotate jobs. Use PPE - gloves, glasses, goggles, and boots.
6. Vehicles and Machinery	Pre-start vehicle checks (Take 5 assessment). Use the manual. Refer to SWI/SOP (standard operating procedures). Use seatbelts. Obey site speed/traffic rules. Maintain awareness of changes in terrain/obstacles/other vehicles. Use load restraints. Avoid overloading. Use PPE.

This resource has been developed by:

Checklist: Safe Work (discuss in reference to the weekly tasks)

		DISCUSSED		DISCUSSION POINTS
		Yes	No	
1	Are all staff fit for duty? E.g. sick, injured, fatigued.			
2	Emergency response number/procedure. Does everyone understand the procedure?			
3	Who are the trained first aiders on this site?			
4	Where are the first aid kits located?			
5	Are fire extinguishers available and where are they located (sheds, machinery); are they serviced?			
6	Emergency evacuation procedures			
7	Working remotely/lone worker procedures (buddy system)			
8	PPE/Uniform requirements e.g. steel cap boots.			
9	Manual Handling - rules, techniques and equipment.			
10	Safe use of all vehicles, plant and equipment "tools not toys"			
11	Plant and equipment maintenance procedures and reporting, e.g. refuelling.			
12	Other relevant documents for work e.g. SWMS/SWI for weekly tasks. Note: SWMS for high risk activities only, e.g. working at heights.			
13	Mixing and spraying chemicals - training and procedures.			
14	Relevant SOS (Safety Observation and Suggestion) forms.			
15	Housekeeping (work area/vehicles tidy)			
16	Reporting processes (ask your teacher about the school WHS reporting system for a "near miss")			
17	Working at heights (needs a SWMS, who is doing the work? Are they qualified?)			

This resource has been developed by:

18	Trailers and tying down loads - appropriate equipment and technique.			
19	Are there any underground services?			
20	Working safely with cattle - (training, facilities and equipment and low stress handling)			
21	Are staff appropriately trained/licensed?			
22	Environmental hazards (sun, heat, snakes etc)			
23	Safely disposing of Waste (where and how?)			
24	Traffic management signage etc			
25	Will the work impact a neighbour?			
26	Should we notify other work teams, faculties or departments about the weekly work tasks?			
27	Safety Showers/Eyewash Station Check			

EMPLOYEE NAME	SIGNATURE

1. When would be the best time to conduct a pre-start meeting with your team of workers? Explain why.

This resource has been developed by:

WORKSHEET 2:

Safe Work Instruction (SWI): Tractor and Machinery Operations

Background Information

Safe Work Instruction (SWI): A discussion with all workers assigned to a task involving the steps and associated hazards, risks and controls with using a piece of machinery and equipment.

Each worker should always conduct a **Take 5 assessment** (five minute check before starting) prior to all tractor operations. [Take 5 Safety: A Comprehensive Guide | Safety Culture](#)

1. What are the 5 elements of a Take-5 assessment?

2. Provide some reasons why a Take 5 would need to be conducted before starting work if you have experience using this equipment.











3. The following is a Safe Work Instruction (SWI) for an enterprise employing tractor operators. Complete the SWI and the associated questions with the use of observations from your school tractor and equipment.

IDENTIFY THE CATEGORIES OF POTENTIAL RISKS / HAZARDS THAT APPLY TO THIS EQUIPMENT.

Biological	Gravity	Office
Driving and Travel	Hazardous Chemical	People
Electricity	Machinery Equipment (Plant)	Psychosocial (harm to mental health e.g. job demands, low job control).
Extreme Temperature	Manual Tasks	Psychosocial hazards Safe Work Australia
Field and Laboratory	Noise	Radiation
		Site Risks

This resource has been developed by:

SELECT ALL PPE REQUIREMENTS FOR USING THIS MACHINERY AND/OR EQUIPMENT.

									
Hard hat	Eye protection	Dusk mask	Ear protection	Protective clothing	Face shield	Gloves	Safety footwear	Harness	Welding mask
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other PPE:

ADMINISTRATIVE CONTROLS: PREREQUISITE REQUIREMENTS

Formal training and certification with RTO

Operators to have completed a Tractor VOC

Record/Report suspect/faulty equipment immediately and Lock out/Tag out

4. What is the minimum certification required to operate a tractor as an employee?

5. A VOC is a verification of competency. This means a worker who is hired with the required certification for using this machine will need to undertake an internal assessment by a senior trained operator to check their competency. Explain why you think it might be necessary for an employer to ensure a safe working environment for all employees?

6. The following set of Safe Work Instructions refer to an example of an SWI designed for use with tractors and machinery on a farm site. The instructions also refer to the operations manual for your specific school tractor. Explain a reason why this instruction needs to be added.

7. Use the following set of Safe Work Instructions with your teacher to check your safety procedures on the school farm. Do you have any additional safety concerns that are not covered in this worksheet? List all that apply.

This resource has been developed by:

SAFE WORK INSTRUCTIONS FOR TRACTOR OPERATIONS

- Record details in the pre-start log book, identify any maintenance conducted e.g.:
 - Check tyre pressures/tyre damage.
 - Top up fluids - fuel/oil/lubrication.
 - Drain air brakes.
- Inspect the operating area - both the access and the site. Make sure it is free of people and debris, including rocks, stones, sticks, wire or other objects that may become projectiles and/or safety/operational hazards.
- Inspect machinery guards, ROPS (Roll Over Protective Structure), fixtures, lights, warning beacons, windscreens, mirrors, seatbelts, hitch points, safety chains, lynch pins and body assembly/frame for signs of wear/damage – lock out/tag out record/report and do not use if defective.
- Ensure that hydraulic rams, hoses and couplings are in sound condition (no visible leaks), are secured as required and are safe for operation.
- Refuel in a well-ventilated area away from any ignition sources.
- Wear appropriate PPE

OPERATIONAL PROCEDURE (REFER TO OPERATIONS MANUAL FOR YOUR MACHINE OR EQUIPMENT).

- Survey and check the ground conditions for environmental and safety considerations, e.g. not too wet for soil damage; traction.
- Always maintain 3 points of contact and ensure you are facing the vehicle while entering/exiting the cabin.
- NEVER carry passengers.
- Carry out all operational checks on lights, mirrors, steering, horn, foot brakes and park brake, warning lights, beacons, drive lights and hydraulics (if operating an implement).
- Ensure the park brake is on, all implements are lowered Front End Loader (FEL), 3 point hitch and the cabin floor is clear of obstructions.
- Operate according to the operator manual at all times and return it to its designated storage location.
- Operate machinery according to the site's traffic control plan, e.g. a speed limit of 30 km/hr on access roads and 10km/hr around buildings is an industry standard.
- Do not inspect the PTO (Power Take Off) shaft when the engine is running.
- Never drive on side slopes greater than five degrees, uphill slopes greater than ten degrees, or drive downhill on slopes greater than fifteen degrees. Keep the load/implement uphill when driving up or down a ramp and refer to the data plate for the rated capacity for loads compliant with your machinery.
- Always keep watch for traffic and pedestrians near buildings or crossing roadways.
- Always shut off the engine, secure the vehicle and allow it to cool before refuelling or performing maintenance during operation.
- Perform a biosecurity washdown procedure according to site biosecurity plan.
- Shutting down: always park on a flat surface away from traffic zones, neutral gear, lower implements, park brake, remove key.

This resource has been developed by:

POTENTIAL HAZARDS WHILST IN OPERATION.

- > Contact or entanglement with buildings, other vehicles, fences, power lines and other machinery.
- > Entanglement in a PTO drive shaft.
- > Variable or rough ground conditions, debris and foreign objects hidden in the work area.
- > Working underground or variable light conditions due to the weather or time of day.
- > Machinery guards not properly fitted, secured or damaged during operation.

POST USE

- > Wash down the biosecurity decontamination bay.
- > Clean cabin.
- > Put the key in the designated office storage location.
- > Conduct post operational checks and record actions in the log book.

SPECIAL NOTE

NO EMPLOYEES ARE TO USE THIS EQUIPMENT PRIOR TO:

OBTAINING VOC COMPETENCY IN THE CORRECT USE OF THE EQUIPMENT.

READING AND FULLY UNDERSTANDING THE OPERATOR'S MANUAL.

READING THE ABOVE STANDARD OPERATING PROCEDURE.

UNDERGOING THOROUGH PRACTICAL TRAINING AND SITE INDUCTION WITH SUPERVISION

EMPLOYEE NAME	DATE	SIGNATURE

This resource has been developed by:

8. Name the device below and describe what it is used for.



This resource has been developed by: