



# PLANT RISK ASSESSMENT REPORT



## SECTION 1: PLANT IDENTIFICATION

<b>Report Number:</b>	407/201-26	<b>Assessment Date:</b>	2 <sup>nd</sup> August 2012
<b>Company:</b>	Wacker Neuson	<b>Plant Type:</b>	Walk-behind Saws
<b>Models:</b>	BFS1214, BFSX130RM, BFS1345AB		
<b>Assessment Purpose:</b>	<input type="checkbox"/> Operational risks associated with the unit as it stands – On site		
	<input type="checkbox"/> Operational risks associated with the unit as it stands – Desk top		
	<input type="checkbox"/> Access Systems		
	<input type="checkbox"/> Modification/s		
	<input checked="" type="checkbox"/> Other : Group assessment of plant type		
<b>Assessed by:</b>	Josh Harley-Hill – VEHTEC Pty Ltd		

## SECTION 2: PLANT SUMMARY

### Preamble:

This assessment is designed to encompass the Wacker Neuson Walk-behind Saw and water kit range mentioned above. The walk-behind saw must only be used outdoors for cutting/cutting to length suitable materials with the cutting blade approved for the unit. The cutting blades of the saw must not be used as a grinding tool (i.e. removing material with the side surface of the cutting blade). This may cause the cutting blade to break. It is prohibited to attach saw blades, knives or brushes to the cut-off saw. This document is intended to highlight Occupational Health Safety and Welfare related risks that may present during on site set up and operation and has been conducted in accordance with the OHS&W Legislation – 2010.

Is the plant designed for its intended use?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<i>Final Sign off by Employer/Owner - All actions/recommendations complete</i>  Name: _____ Position: _____  Signed: _____ Date: _____
Has the plant been modified from the original design?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Is the plant in good working condition?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Is action required before the plant can be safely used?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Has the required action / remedy been undertaken?	<input type="checkbox"/> Yes <input type="checkbox"/> N/A	



Photographs are for illustrative purposes only. Functions, layout, engines and bodies will vary between models

**SECTION 3: RISK ANALYSIS LIKELIHOOD AND CONSEQUENCES**

Table 1 Measure of Likelihood (L)		
Level	Description	Detail
<b>A</b>	Almost Certain	The event is expected to occur in most circumstances
<b>B</b>	Likely	The event will probably occur in most circumstances
<b>C</b>	Moderate	The event should occur at some time
<b>D</b>	Unlikely	The event could occur at some time
<b>E</b>	Rare	The event may occur only in exceptional circumstances

Table 2. Measure of Consequences or Impact (C)		
Level	Description	Detail
<b>1</b>	Insignificant	No injuries, low financial loss
<b>2</b>	Minor	First Aid treatment, on site release immediately contained, medium financial loss
<b>3</b>	Moderate	Medical treatment required, on site release contained with outside assistance, high financial loss
<b>4</b>	Major	Extensive injuries, loss of production capability, off site release with no detrimental effects, major financial loss
<b>5</b>	Catastrophic	Death, toxic release off site with detrimental effect, huge financial loss

Table 3. Risk Analysis Matrix (Risk)					
Likelihood	Consequences				
	Insignificant <b>1</b>	Minor <b>2</b>	Moderate <b>3</b>	Major <b>4</b>	Catastrophic <b>5</b>
<b>A</b> (Almost certain)	<b>S</b>	<b>S</b>	<b>H</b>	<b>H</b>	<b>H</b>
<b>B</b> (Likely)	<b>M</b>	<b>S</b>	<b>S</b>	<b>H</b>	<b>H</b>
<b>C</b> (Moderate)	<b>L</b>	<b>M</b>	<b>S</b>	<b>H</b>	<b>H</b>
<b>D</b> (Unlikely)	<b>L</b>	<b>L</b>	<b>M</b>	<b>S</b>	<b>H</b>
<b>E</b> (Rare)	<b>L</b>	<b>L</b>	<b>M</b>	<b>S</b>	<b>S</b>

**Legend:**

- **H**= High risk, detailed research and management planning required.
- **S**= Significant risk, senior management attention needed. Continuous review.
- **M**= Moderate risk, management responsibility. Periodic review
- **L**= low risk, manage by routine procedures. Periodic review to ensure risk does not increase.

\*Only hazards with a risk deemed higher than 'low' need to be controlled

## SECTION 4: HAZARD IDENTIFICATION

Hazard Item N <sup>o</sup>	Hazard Item Observation Detail	Hazard	L	C	Risk
<b>1</b>	<b>Plant in its current state has potential to cause injury/illness due to:</b>				
1.1	Entanglement <b>(Operator/Bystander inadvertently contacting rotating blade. Operator has good vision of the plant)</b>	Yes	D	5	H
1.2	Puncturing	No			
1.3a	Cutting <b>(Operator positioning or adjusting the operators control handle)</b>	Yes	D	5	H
1.3b	<b>(Operator positioning or adjusting front wheel height)</b>	Yes	D	3	M
1.3c	<b>(Operator/Bystander inadvertently contacting rotating blade. Operator has good vision of the plant)</b>	Yes	D	3	M
1.4a	Stretching <b>(Operator incorrectly starting the unit)</b>	Yes	D	3	M
1.4b	<b>(Incorrect operation of the unit)</b>	Yes	D	3	M
1.4c	<b>(Incorrect lifting procedure during assembly/disassembly of cutting unit)</b>	Yes	D	2	L
1.5	Stabbing	No			
1.6	Trapping <b>(Operator positioning or adjusting the operators control handle)</b>	Yes	D	3	M
1.7	Abrasion <b>(Operator may contact back of hand during start up)</b>	Yes	D	2	L
1.8	Engulfment	No			
1.9a	Crushing <b>(Operator positioning or adjusting the operators control handle)</b>	Yes	D	3	M
1.9b	<b>(Operator positioning or adjusting front wheel height)</b>	Yes	D	3	M
1.10a	Shearing <b>(Operator positioning or adjusting the operators control handle)</b>	Yes	D	5	H
1.10b	<b>(Operator position or adjusting front wheel height)</b>	Yes	D	3	M
1.10c	<b>(Operator/Bystander inadvertently contacting rotating blade. Operator has good vision of the plant)</b>	Yes	D	3	M
1.11a	Tearing <b>(Operator incorrectly starting the unit)</b>	Yes	D	3	M
1.11b	<b>(Incorrect operation of the unit)</b>	Yes	D	3	M
1.11c	<b>(Incorrect lifting procedure during assembly/disassembly of cutting unit)</b>	Yes	D	2	L
1.12	Asphyxiation	No			
1.13a	Slips, Trips <b>(Incorrect operation of the unit. Unit has the ability to heavily 'Pull Forward' or 'Kick Back'. SOP to be followed at all times)</b>	Yes	B	2	L
1.14	Falls	No			
1.15	Falling Objects <b>(Care to be taken when operating near pits or trenches. Never operate above workers, in trenches or on scaffolding)</b>	Yes	D	3	M
1.16	Expelled Parts <b>(Cutting blade may expel foreign materials towards Operator/Bystanders)</b>	Yes	C	2	M
<b>2</b>	<b>Plant in its current or intended state has the potential to create a hazardous condition due to:</b>				
2.1	Pressured Content	No			
2.2	Explosion <b>(Operator Manual engine refuelling procedures to be followed)</b>	Yes	D	4	S
2.3	Radiation	N/A			
2.4	Vapour <b>(Operator Manual engine refuelling procedures to be followed)</b>	Yes	D	2	L
2.5	Dust <b>(Operator Manual PPE requirements to be strictly obeyed. Additional PPE requirements for Operator/Bystander to be managed by SOP and/or Employer/Owner policy. Water sprayer fitted and shall be used when dust formation is excessive)</b>	Yes	D	3	M

2.6	Moisture <b>(Unit fitted with water sprayer and shall be used when dust formation is excessive. Introducing inherent moisture exposure)</b>	Yes	D	2	L
2.7	Gases <b>(Not to be used in confined space without ventilation) (Operator required to wear appropriate PPE)</b>	Yes	D	2	L
2.8a	Fire <b>(Exhaust can reach high temperatures – do not position close to flammable materials or liquids whilst hot)</b>	Yes	E	5	S
2.8b	<b>(Blade may emit sparks during use. Do not operate in close proximity to flammable materials. Never use blade for grinding. SOP to be followed as per Operators Manual.)</b>	Yes	E	5	S
2.9	Vibration <b>(Vibrates by nature – Operators to exercise caution and rest as required. Managed by Employers/Owners SOP)</b>	Yes	A	2	S
2.10	Electricity <b>(Control measures to be taken whilst operating in close proximity to underground cabling)</b>	Yes	E	3	M
2.11	Friction <b>(Friction between cutting surface and blade may become excessive. ‘Kick Back’ or ‘Pull Forward’ may occur during operation. SOP to be followed at all times.)</b>	Yes	D	2	L
2.12	Ice Formation	No			
2.13	Laser Beams	No			
2.14	Hot and Cold Parts <b>(Engine when performing maintenance checks, checks to be undertaken when unit is cold. Never perform maintenance when unit is hot. Exhaust system outlet on engines may reach high temperatures at times.)</b>	Yes	E	2	L
2.15	Temperature Extremes <b>(Operator to be managed by SOP and/or Employers/Owners policy)</b>	Yes	D	2	L
2.16	Noise (Low dB levels) <b>(Operator required to wear appropriate PPE)</b>	Yes	A	2	S
Yes / No / N/A					
3	Manual handling requirements have been assessed as acceptable <b>(To be lifted using designated lift points as per operators manual. Employers/Owners assessment required)</b>	Yes			
4	Repetitive, forceful, awkward, sustained movements have been minimised/ eliminated <b>(Designed for application)</b>	Yes			
5	The current guard (s) and their condition are adequate for this plant <b>(Designed for application)</b>	Yes			
6	Is the guarding appropriate for all work requirements <b>(Designed for application)</b>	Yes			
7	Operator controls are located for ease of use by operators	Yes			
8	Operator controls are identified and marked appropriately	Yes			
9	Emergency stops are clearly marked	Yes			
10	Emergency stops are located at the most likely place (s) for emergency use	Yes			
11	The power source of the plant has been designed, constructed, installed, protected, maintained as to minimise the risk of harm to employees. <b>(Unit to be maintained as per Operators Manual)</b>	Yes			
12	There is provision to lock out the plant, and dissipate energy	Yes			
13	Access platforms/ladders/handrails are provided	N/A			
14	Access to moving parts from the platform can be performed safely	N/A			
15	Access platforms/ladders/handrails provide secure, non slipping access	N/A			
16	Lighting is adequate for plant operation, maintenance and cleaning at any time. <b>(No lighting provision, limited to environmental lighting)</b>	No			
17	Noise levels have been assessed as below 85dB(A) <b>(Operator required to wear appropriate PPE)</b>	No	A	2	S
18	Personal Protective Equipment (PPE) has been provided for safe operation of this plant <b>(Employers/Owners responsibility)</b>	N/A			
19	PPE requirements are signposted <b>(Employers/Owners responsibility dependant on internal Management Policies)</b>	Yes			
20	There is provision for safe cleaning of this plant (NB availability of cleaning devices) <b>(As detailed within Operators Manual)</b>	Yes			
21	Safe access to areas to be cleaned has been provided	Yes			
22	There is provision for easy and safe scrap removal	Yes			

23	The plant has the potential to jam/block. <b>(Ingress of foreign materials into cutting blade plane. Material cut in a manner where compressive loading of the cutting plane occurs.)</b>	Yes	C	1	L
24	A safe system of work has been established to remove jam/blockage <b>(Blade block/jam only to be cleared by trained or experienced persons. Unit to be isolated in terms of operating manual) (Employer/Owner assessment required)</b>	N/A			
25	Safe system of work has been established for any sample retrieval	N/A			
26	There is adequate provision to properly service and routinely grease and oil the plant <b>(Unit to be maintained by appropriately trained personnel in terms of operators manual)</b>	Yes			
27	Safe systems of work have been established for hazards associated with any necessary maintenance of the plant <b>(Employer/Owner responsibility)</b>	N/A			
28	The rigidity and stability of the plant and supporting structure is adequate. <b>(Unit to be operated within its capabilities and with regard to recommended operating environs)</b>	Yes			
29	The environment in which the plant is situated has been assessed for its interrelationship with this plant as acceptable <b>(Employer/Owner responsibility)</b>	N/A			
30	Ventilation and/or other air flow needs are adequate	Yes			
31	Static electricity hazards have been assessed and controlled	N/A			
32	Workplace substances associated with the use of the plant have been assessed	N/A			
33	Authorised entry systems for the plant and surrounds have been established	N/A			
34	The upstream and downstream effects of malfunction or unscheduled stoppage of the plant have been considered <b>(Employer/Owner responsibility)</b>	N/A			

**SECTION 5: RISKS AND CONTROLS**

Summary of Hazards Identified and solution(s) to adequately manage the respective risk.						
Hazard Item No	Level of Risk	Action Required / Comments				
1.1 1.3a 1.3b 1.3c 1.4a 1.4b 1.4c 1.6 1.7 1.9a 1.9b 1.10a 1.10b 1.10c 1.11a 1.11b 1.11c 1.13 1.15 1.16 23	<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="width: 33%; background-color: #90EE90; text-align: center;">Low</div> <div style="width: 33%; background-color: #FFFF00; text-align: center;">Moderate</div> <div style="width: 33%; background-color: #FF0000; text-align: center;">High</div> </div>	<p><u>Hazard</u>                      General set up and operation of the Walk-behind Saw creates many hazards.</p> <p><u>Comments</u>                      Incorrect use of the unit poses a physical risk to the operator and/or bystanders.</p> <p><u>Controls</u>                      Complete familiarisation of the Wacker Neuson Operators Manual shall be mandatory.</p> <p>A Standard Operating Procedure (SOP) should be developed for the correct use of the unit complimentary to the Wacker Neuson Operators Manual.</p> <p>Operator is to perform a Jobsite Safety Analysis (JSA) prior to operation. Work Zone Traffic Management (WZTM) procedures need to be implemented prior to operation. By nature the saw poses a significant risk. Operator to keep bystanders well away from blade during starting and operation. Operators Manual to be strictly followed during blade replacement.</p> <p>Pinch points exist whilst adjusting the operator handle position and assembling/disassembling the saw and water trolley. Operator to maintain awareness of limbs during these processes. Prior to starting the unit, the operator is to ensure that both they and the unit are on stable level ground.</p> <p>The unit has the ability to aggressively ‘kick back’ or ‘pull forward’ during operation. Operating as per SOP and Operators Manual only reduces the likelihood of an occurrence. Awareness and readiness for the possibility of kick back and pull forward shall always be maintained.</p> <p>Unit is not designed for grinding. If used as a grinder there is a high likelihood of shattering the blade, resulting in the expulsion of sharp objects towards Operator and Bystander.</p> <p>When operating on slopes, always operate the unit up and down slopes rather than from side to side. NEVER operate the unit sideways on slopes, in close proximity to occupied trenches and pits or on scaffolding.</p> <p><u>Revised Risk Assessment</u>                      With the above controls in place the risk is considered controlled.</p>			<p><u>Action Required</u></p> <p>Complete familiarisation of the Wacker Neuson Operators Manual shall be mandatory.</p> <p>A Standard Operating Procedure (SOP) should be developed for the correct use of the unit complimentary to the Wacker Neuson Operators Manual.</p>	
		Responsible Person	Operator Employer/Owner	Due Date		
		<p>Actioned by: (Name &amp; Date)</p>				
		<p>Verified by: (Name &amp; Date)</p>				

2.2 2.8a 2.8b	<b>Significant</b>	<p><u>Hazard</u> General operation of the Walk-behind Saw exposes both the operator and bystander to risk of explosion and fire.</p> <p><u>Comments</u> Incorrect use and refuelling of the unit poses a physical risk to the operator and bystanders.</p> <p><u>Controls</u> Complete familiarisation of the Wacker Neuson Operators Manual shall be mandatory.</p> <p>A Standard Operating Procedure (SOP) should be developed for the correct use of the units systems complimentary to the Wacker Neuson Operators Manual.</p> <p>Operator is to perform a Jobsite Safety Analysis (JSA) prior to operation. Work Zone Traffic Management (WZTM) procedures need to be implemented prior to operation with particular attention paid to flammable materials.</p> <p>Particular attention shall be paid to the correct procedure and PPE for refuelling of the unit. Only refuel a cold engine and reduce exposure time to fuel gases.</p> <p>Blades may emit sparks during operation especially if incorrectly used outside of designed purpose. Unit is not designed for grinding. Care to be taken to remove any flammable materials away from working area.</p> <p><u>Revised Risk Assessment</u> With the above controls in place the risk is considered controlled.</p>	<u>Action Required</u>	Nil		
			<u>Responsible Person</u>	Operator	<u>Due Date</u>	
			<u>Actioned by:</u> (Name & Date)			
			<u>Verified by:</u> (Name & Date)			

2.5 2.16 17	Moderate	Significant	<p><u>Hazard</u> General operation of the Walk-behind Saw exposes both the operator and bystander to risk of dust and noise.</p> <p><u>Comments</u> Walk-Behind Saws can create dust and noise through normal operations.</p> <p><u>Controls</u> Complete familiarisation of the Wacker Neuson Operators Manual shall be mandatory.</p> <p>A Standard Operating Procedure (SOP) should be developed for the correct use of the unit complimentary to the Wacker Neuson Operators Manual.</p> <p>Operator is to perform a Jobsite Safety Analysis (JSA) prior to operation. Work Zone Traffic Management (WZTM) procedures need to be implemented prior to operation with particular attention paid to flammable materials.</p> <p>Appropriate noise PPE to be supplied and worn as required by the SOP. Operators are to take appropriately spaced breaks in line with SOP to reduce exposure to noise.</p> <p>Unit is fitted with a water spray function which shall be used when dust formation is excessive.</p> <p>Unit must be operated within and environment as specified by the Operators Manual.</p> <p><u>Revised Risk Assessment</u> With the above controls in place the risk is considered controlled.</p>	<u>Action Required</u>	Nil		
				Responsible Person	Operator	Due Date	
				Actioned by: (Name & Date)			
				Verified by: (Name & Date)			

2.9 2.10	Moderate	Significant	<p><u>Hazard</u> General operation of the Walk-behind Saw exposes both the operator and bystander to risk of vibration, electricity and friction.</p>	<u>Action Required</u>	Nil		
			<p><u>Comments</u> Demolition Saws can create vibration and friction through normal operations.  There is the possibility of electrocution if the demolition saw were to cut through live electrical cable.</p>	Responsible Person	Operator	Due Date	
			<p><u>Controls</u> Complete familiarisation of the Wacker Neuson Operators Manual shall be mandatory.  A Standard Operating Procedure (SOP) should be developed for the correct use of the unit complimentary to the Wacker Neuson Operators Manual.  Operator is to perform a Jobsite Safety Analysis (JSA) prior to operation. Work Zone Traffic Management (WZTM) procedures need to be implemented prior to operation with particular attention paid to the location of visible and hidden electrical cables.</p>	Actioned by: (Name & Date)			
			<p>Appropriate noise PPE to be supplied and worn as required by the SOP. Operators are to take appropriately spaced breaks in line with SOP to reduce exposure to vibration.  The unit has the ability to aggressively ‘kick back’ or ‘pull forward’ during operation when friction becomes excessive. Operating as per SOP and Operators Manual only reduces the likelihood of an occurrence. Awareness and readiness for the possibility of kick back and pull forward shall always be maintained.</p> <p><u>Revised Risk Assessment</u> With the above controls in place the risk is considered controlled.</p>	Verified by: (Name & Date)			

## SECTION 6: CONTROL MEASURES AND TRAINING

### ***Control Measures***

<b>Pre-Operation</b>	<b>Complete familiarisation of the Wacker Neuson Operators Manual and all systems shall be mandatory.</b>
<b>General Operation</b>	<b>A Standard Operating Procedure (SOP) should be developed for the correct use of the units systems complimentary to the Wacker Neuson Operators Manual.</b>
<b>Modifications</b>	Any modification to the factory unit should be strongly considered to ensure that it will not have any detrimental effect to the stability, safety or operation of the unit. Modifications should only be undertaken by suitably qualified or experienced persons.
<b>Attachments</b>	Only OEM attachments (or those authorised by the OEM) should be used on the unit. Non authorised attachments may affect the safety and stability of the unit when in operation.
<b>Operational Risk</b>	This risk assessment does not negate the requirement of the operator/supervisor to conduct an operational risk assessment of this piece of plant for its intended use and its interface with the operators and the suitability of this piece of plant to integrate and complete the required task. This document has been prepared with due care, however cannot be considered complete given the limited knowledge of the intended operational environment.
<b>Work Zone Traffic Management</b>	This risk assessment has been prepared with the knowledge that effective Work Zone Traffic Management (WZTM) systems will be employed in line with AS1742.3, OHS&W Regulations 2010, Road Traffic Act 1971 and internal Standard Operating Procedures.
<b>Continuous Review</b>	This document is not intended to be static, nor is it intended to be considered complete for all situations. This document forms the basis to allow the Employer/Owner of the asset to have an informed position. A system of continuous review should be embraced in line with Management Policies.

### ***Operator Competencies***

Formal Qualifications:	Must comply with the regulations enforced by the WorkSafe authority within the state that the plant is being operated.
Competency Assessed Skills:	Skills must comply with the requirements of the guidelines established by the relevant state based WorkSafe authority and assessed by the state WorkSafe body's authorised assessor.
General Training Instruction:	On the job training by qualified Operator
Experience:	As appropriate and assessed (as above)
Standard Work Procedure (s):	To be developed by the client/user

## SECTION 7: PLANT INSPECTIONS, MAINTENANCE AND TESTING

Inspection, Maintenance and Testing Requirements	Frequency
Manufacturers Operator and Service manuals as supplied with the plant	Refer Operator Manual
Servicing and Maintenance	As per Manufacturers guidelines
Daily checks as per Operators Manual	Daily before use

*\*This is not a definitive list and may need to be revised over time*