ST GOBAIN ABRASIVES PTYLTD
25 NYRANG ST LIDCOMBE
NSW 2141

JUNE 2008

OCCUPATIONAL HEALTH AND SAFETY RISK ASSESSMENT REPORT

- CLIPPER SMALL CONCRETE SAW C13P18-

DRAFT

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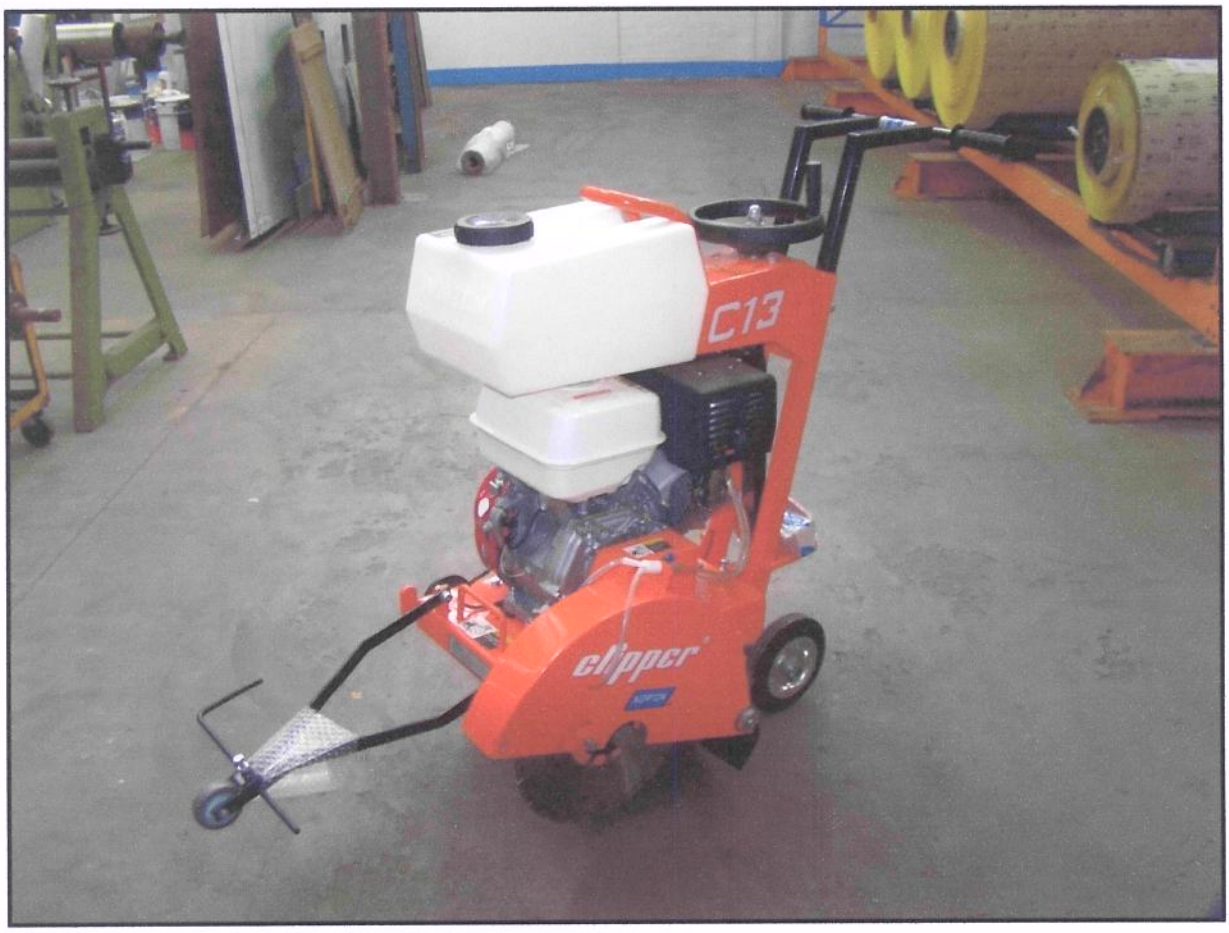
NOTE: All care has been taken in preparing this report, however the responsibility of hazard identification and risk minimisation remains with the designer, manufacturer, supplier, installer and employer.
This responsibility can not be transferred or wavered in any way

Prepared by

Roger Roberts

Machinery safety specialist

Risk Assessment & Technical solutions Pty Ltd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PLANT SAFETY REVIEW – RISK ASSESSMENT PROGRAM

REPORT FOR:	ST GOBAIN ABRASIVES PTY LTD
DATE ASSESSED:	JUNE 2008
PLANT ASSESSED:	SMALL CONCRETE SAW C13P18
PREPARED BY:	Roger Roberts, Machinery safety specialist

WARNING

DO NOT OPERATE OR CARRY OUT WORK ON THIS MACHINE UNTIL YOU HAVE READ & UNDERSTOOD THE INSTRUCTIONS AND WARNINGS DETAILED IN THE OPERATION AND MAINTENANCE MANUALS. FAILURE TO FOLLOW THOSE INSTRUCTIONS AND WARNINGS COULD RESULT IN INJURY OR DEATH AND/OR DAMAGE TO THE MACHINE.

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PREAMBLE

All Australian States now have Occupational Health and Safety Regulations that require risk assessments be undertaken by manufacturers, importers suppliers of plant. The Regulations require the designers, manufacturers and importers to identify the hazards, assess the risks of those hazards and control those risks, as far as is reasonably practicable and provide the relevant information about the plant to the suppliers and employers.

The employers must also carry out hazard identification, risk assessment and risk control for the use of the plant in the workplace. These assessments must be carried out for all new or modified plant before use.

SCOPE

As a designer, manufacturer and supplier of plant in Australia, Saint-Gobain Abrasives provides this hazard identification and risk assessment information. It also provides appropriate recommendations where required on risk controls.
This type of plant can be used in different locations and environments and therefore the risk assessment can not take into account specific hazards that may be present on individual sites.
It is necessary for each employer to carry out risk assessments on site to ensure risk control measures are appropriate to minimise the risk of injury.

Whilst the information is not exhaustive in all possible risks. Saint-Gobain Abrasives however, believes that they provide practical guidance in the safe operation of the plant, provided that the plant is used in accordance with the designers/manufacturer's recommendations for which the plant is designed and manufactured. A comprehensive owner's manual is provided and should be read in conjunction with this risk assessment documentation before using the plant.

Saint-Gobain Abrasives clients should review these assessments and ensure that the relevant risk controls recommended are in place. They should also add or modify risks where appropriate for the environment where the plant is to be used.

METHODOLOGY

A model of the machine and its instruction manual have been reviewed and assessed in accordance with the requirements of O H & S Plant Regulations in each State. A generic assessment has been developed for the plant.

The focus of the review is to ensure all practicable risk controls are employed and any residual risks associated with the use of the equipment is minimised by administrative controls and use of appropriate personal protective equipment.

The risk assessment criteria are:

- Frequency of exposure
- Likelihood of hazard causing injury
- Severity of injury

From a designer/manufacturer's point of view, it is often difficult to determine frequency of exposure to the potential hazards because of their limited knowledge of the final use of the machines and the types of environments they are going to be used in.

The probability or likelihood of a hazard causing injury will depend on the adequacy of the risk controls such as the integrity of the safeguards provided. Therefore machine with identified hazards that are not appropriately guarded will increase the likelihood of injury and therefore the level of risk in the use of the machine.

A risk assessment priority matrix is therefore used to determine the risk rating for each of the identified potential hazards.

RISK ASSESSMENT WORKSHEETS

- The risk assessment worksheets attached in the appendix lists the potential hazards (including the sources of potential hazards) and risk controls that must be observed when operating or maintaining these machines.
- Make sure you fully understand these points and observe them before using the machine. Read and understand the Owner's manual as well as the risk assessments.

- The user should re-evaluate the site conditions because the working environment may affect the risks associated with the use of the plant.
- The supplied manual specifies that only qualified persons should operate, maintain and repair the machine. The term "qualified person" is intended to be consistent with the definition of a "competent person" as defined in the National Standard for Plant. Defined as a person who has acquired through training, qualification, or experience, or a combination of these, the knowledge and skills enabling that person to perform the task.
- Ensue the plant is used in accordance with the manufacturer's recommendations and what it is designed for.

REFERENCES

Plant Safety Legislation

The National Standard for Plant was developed by representatives from all States and Territories. The document was to provide all those States and Territories with the framework for the current O.H.&S. Regulations for plant.
All States and Territories and including the Commonwealth now have O.H. & S. Regulations for Plant.

A common requirement of those Regulations is to carry out Risk assessments of plant.

Safety Standards

The Australian standards that have been referenced in the development of this document are:

- AS4024.1 Safeguarding of machinery, Part 1: General Principles.
- AS2790 Electricity generating sets – Transportable (up to 25kw)
- AS1270 Hearing Protection Devices.
- AS1337 Eye Protection for Industrial Applications.
- AS2210 Occupational Protective Footwear.

APPENDIX 1

RISK ASSESSMENT PRIORITY MATRIX

PROBABILITY	SEVERITY			
	Catastrophic (4)	Critical (3)	Marginal (2)	Negligible (1)
Frequent (A)	High (4A)	High (3A)	High (2A)	Medium (1A)
Probable (B)	High (4B)	High (3B)	Medium (2B)	Low (1B)
Occasional (C)	High (4C)	High (3C)	Medium (2C)	Low (1C)
Remote (D)	High (4D)	Medium (3D)	Low (2D)	Low (1D)
Improbable (E)	Medium (4E)	Low (3E)	Low (2E)	Low (1E)

CODE

Highest Risk:

Medium Risk:

Lowest Risk:

PROBABILITY

The probability of a hazard actually occurring within the life of the plant can fall within one of the following categories -

	Single Event	Multiple Events
Frequent (A)	Likely to occur frequently.	Continuously experienced
Probable (B)	Likely to occur several times.	Likely to occur frequently.
Occasional (C)	Likely to occur sometime.	Likely to occur several time.
Remote (D)	Unlikely but possible.	Unlikely but can reasonably be expected to occur.
Improbable (E)	So unlikely it can be assumed occurrence may not be experienced.	Very unlikely but possible.

SEVERITY

Severity categories provide a qualitative measure of the credible 'worst case' impact of a hazard.

Catastrophe (4)	Deaths, system loss, or severe environmental damage.
Critical (3)	Severe injury, several occupational illness, major system or environmental damage.
Marginal (2)	Minor injury, minor occupational illness, minor system or environmental damage.
Negligible(1)	Less than minor injury, occupational illness, or less than minor system or environmental damage.

APPENDIX 2

RISK ASSESSMENT WORKSHEETS

CLIPPER BBC BRICK SAW (ELECTRIC MODEL)

Plant: Petrol powered floor/road saw

POTENTIAL HAZARDS (including sources of potential hazards)	Probability	Severity	Risk Rating	RISK CONTROL MEASURES	Residual Risk
TRANSPORTATION 1 Falling or rolling machine during transport if unsecured.	B	3	High	• Remove the blade. • Apply brake to rear wheels. • Secure machine to vehicle. • Lift only with lifting points provided. • Too heavy to lift manually, recommend the use of ramps for loading onto vehicle.	High (3C)
2 Contamination from spilled fuel in transport.	B	3	High	• Ensure all fuel caps are tight before lifting or transport. • Ensure fuel containers are secured tightly in transit.	High (3C)
3 Manual handling from lifting machine.	D	3	Medium	• This machine should not be manually lifted. • Keep all persons clear of the machine when lifting. • Lifting points are provided for crane use.	Low (3E)
SETTING UP 4 Laceration from blade and suffocation hazard from fumes. Control of the machine.	C	3	High	• Ensure machine is switched off. • Follow instructions in the manual for mounting of the blade. • Use only in a well ventilated area. Do not use in a confined space. • Do not place hands or feet near rotation blade. • Always wear protective footwear. • Familiarise yourself with the work area, evenness of floor, and availability of assistance in the event of an accident. • Do not use on steep slopes.	Medium (3D)
5 Explosion or fire from fuel vapours	C	3	High	• Stop the motor before refuelling. • Do not refuel when hot. • Only use the recommended fuels. • Ensure fuel cap is secured after refuelling. • Avoid spillage of fuel when refuelling. • Carry out visual inspections for fuel leaks prior to restarting machine. • Keep flammable substances away from motor at all times. • Do not smoke while operating, maintaining, or refuelling the machine.	Medium (3D)

POTENTIAL HAZARDS (including sources of potential hazards)	Probability	Severity	Risk Rating	RISK CONTROL MEASURES	Residual Risk
STARTING THE MACHINE 6 Stability of the machine.	D	3	Medium	• Ensure the machine is on a stable, level surface. • Apply brake to rear wheels when not in use. • Always maintain control of handles when in use. • Ensure all guards are in place, and belts are tight. • Ensure appropriate personal protective equipment (PPE) is used. • Ensure adequate space for safe operation.	Low (3E)
7 Entanglement of hair, clothing, gloves, necktie, jewellery, cleaning brushes, rags or other materials.	C	3	High	• Keep foreign objects clear of the blade when in use. • Keep all foreign objects clear of the belts. • Ensure belt guards are fitted at all times. • Keep hands and feet clear of cutting area.	High (3C)
SAFE OPERATION 8 Laceration by rotating blade.	D	3	Medium	• Ensue all guards, fixtures and warning labels are in place. • Ensure appropriate PPE is used. Dust mask must be worn when dry cutting. • Hazard warning signs must be fitted on the guard so that they are clearly visible to the operator. • Ensure use in accordance with the manufacturer's instruction manual. • Ensue area to be cut is clearly marked and fenced off from the public. • Assess the slope of the surface to be cut to ensure the machine's stability.	
9 Suffocation from exhaust or contaminants.	C	3	High	• Use only in a well ventilated area. • Do not use in a confined space.	Medium (3D)
10 Coming in contact with hot engine parts.	C	2	Medium	• Ensure muffler is fitted with a heat shield. • Let engine cool before any maintenance work. • Avoid contact with hot engine parts.	Medium (3D)
11 Slipping, tripping or falling due to poor housekeeping or slippery or uneven surfaces.	C	2	Medium	• Care should be taken due to water on the work surface. • Ensure hoses are placed in a way to minimise tripping.	Medium (2C)

POTENTIAL HAZARDS (including sources of potential hazards)	Probability	Severity	Risk Rating	RISK CONTROL MEASURES	Residual Risk
12 Noise.	B	2	Medium	• Ensure machines are appropriately labelled and meet the relevant State legislative requirements. • Use appropriate PPE to minimise hearing damage.	Medium (2C)
STOPPING 13 Cutting and entanglement from run down time of rotating blade.	E	2	Low	• Rotating blade has run down time. • Ensure the blade has stopped before removing guard.	Low (2E)
14 Cutting and entanglement from coming in contact with the drive belts.	E	2	Low	• Ensure belt guard remains fitted to the machine. • Do not remove belt guard while machine running.	Low (3E)
STORAGE (long term) 15 Housekeeping and minimise risk of blockage.	E	2	Low	• Clean the machine. • Empty the water system. • Empty fuel tanks in an environmentally friendly manner. • Loosen drive belts.	Low (2E)
MAINTENANCE 16 Cutting, suffocation, explosion, burns during maintenance.	C	3	High	• Stop machine before any maintenance work. • Operate in well ventilated area. • Do not operate in a confined space. • Do not breathe petrol fumes. • Let the engine cool before any maintenance work. • Avoid contact with hot components. • Stop the engine before refuelling. • Do not refuel when hot. • Ensure fuel cap is secured after refuelling. • Follow manufacturer's recommendations for cleaning and maintenance of the machine. • Ensure machine is securely mounted to minimise risk of it falling. • Apply brake before carrying out any maintenance. • Do not start machine with belt or blade guards removed. • Regularly check the condition of the belts as per the owners manual.	

POTENTIAL HAZARDS (including sources of potential hazards)	Probability	Severity	Risk Rating	RISK CONTROL MEASURES	Residual Risk
PROVISION OF INFORMATION 17 Lack of relevant operation and maintenance instructions.	C	3	High	• Ensure all relevant operation and maintenance instructions are provided in accordance with the relevant State Occupational Health and Safety Plant Regulations.	Low (2D)

Note: (1) Refeer to Risk Matrix.
(2) Residual Risk is the remaining risk following implementation of Risk control measures.