GUARDA EDGE POWERCUTTER

Operator's Manual

Read these instructions carefully and make sure you understand them before using the machine. Failure to do so could result in serious injury, property damage or death.

PATENTS PENDING

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GUARDA
WORK HARD. BREATHE EASY.

WARNING!
Read the operating manual carefully before using the Guarda Edge Powercutter.

WARNING!
The Guarda Edge Powercutter must always be used in conjunction with a vacuum system that can capture the slurry that the saw produces.

WARNING!
Use only with water and vacuum on full. Refer to start and stop instructions on page 19

WARNING!
The slurry produced while cutting can be heavy. Ensure you read and follow “set up and connection options” on pages 15-18

WARNING!
The Guarda Edge Powercutter uses water to cool the exhaust gases. To prevent water entering the muffler always:

1. **have the vacuum system on when the water is on,**
2. **always stand the Edge Powercutter in the vertical position on its feet when the water is on and the machine is not being operated.**
3. **Run the vacuum system for several minutes at completion of job or move it to clear vacuum lines of any water.**

WARNING!
The exhaust fumes are cooled by a combination of water and air flow around the muffler port. Slurry blockages can impede the flow of air and water. This will stop the air flow which will prevent exhaust cooling. As a result the hoses will get hot and may melt. Always ensure that the water supply, and the saws main tap are turned on full and the vacuum is on before cutting, to minimise the chance of slurry blockages. The main indicator of a blockage will be slurry running out from the front of the blade guard. If this occurs immediately stop the saw and clear the blockage to ensure heat buildup from the exhaust does not melt the hoses. If blockage occurs refer to page 25 for instructions to clear it.

WARNING!
If vacuum automatically shuts off, the exhaust fumes produced by the saw will no longer be cooled and the hose will melt within 1 minute of operation. If vacuum shuts off, slurry will flow from the front of the blade guard. In this case ensure the Edge Powercutter is turned off immediately and vacuum is emptied.

WARNING!
Only use diamond blades with a steel core blank. Never use abrasive blades.

For setup and connection options refer to page 15-18

For system start and stop sequence refer to page 19

CONTENTS

Before using your new Power cutter

- Read the Operator's Manual carefully.
- Check the assembly and adjustment of the cutting blade, see chapter "Assembly".
- Start the engine and check the carburetor settings. See chapter "Maintenance", section "Carburetor". When adjusted correctly the cutting blade should not rotate when idling. Setting the idling speed is described in the Operator's Manual. Adjust the speed according to these instructions. Do not use the power cutter if the idling speed is not correctly adjusted!
- Let your Guarda dealer check the power cutter and carry out essential adjustments and repairs.

Maintenance, replacement, or repair of the emission control devices and systems should be performed by a qualified nonroad engine repair establishment or individual.

WARNING!
Under no circumstances should you modify the original design of the power cutter without approval from the manufacturer. Always use genuine spare parts. Unauthorized modifications or accessories may lead to serious injury or death.

Your warranty does not cover damage or liability caused by the use of non-authorized accessories or replacement parts.

WARNING!
Use of products which cut, grind, drill, sand or shape material can generate dust and vapors which may contain harmful chemicals. Know the nature of the material being worked on and wear appropriate dust mask or respirator protection.

WARNING

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

You will find the following label on your power cutter:

List of Contents

Symbol explanation 4

What is what?
What is what on a power cutter? 5

Safety instructions
Personal protective equipment 6
The power cutter's safety equipment 6
Control, maintenance and service of the machine's safety equipment 7
General safety instructions 8
Transport and storage 8
Fuel safety 9
General working instructions 9
Cutting 9
Kickback 10
Care and storage....11
Cutting blades 12
Diamond blades 12

Assembly
Checking the drive shaft and flanges 13
Fitting the cutting blade 13

Fuel handling
Fuel mixture 14
Fuelling 14

Set up and connections options
Set up option 1 - with Guarda Exhaust Vacuum....15
Set up option 2 - with Guarda Vacuum Generator....16
Set up option 3 - with conventional wet vacuum and Slurry Interceptor....17
Set up option 4 - With conventional wet vacuum....18

Start and stop
Sequence 19
Procedure 20

Operating Technnique
Minimising dust and slurry 21

Maintenance
Carburetor....22
Fuel filter....22
Air filter....22
Starter....23
Ignition system....24
Spark plug....24
Cooling system....24
Muffler....24
Clearing hose blockages....25
Clearing exhaust blockages....26
Daily maintenance....27
Weekly maintenance....27
Monthly maintenance....27

Technical Data
Edge Powercutter....28
General warning silica dust....29

Guarda Systems has a policy of continuous product development and therefore reserves the right to modify the design and appearance of products without prior notice.

SYMBOL EXPLANATION

Symbols on the power cutter:

WARNING! The power cutter can be dangerous! Careless and incorrect use can result in serious or fatal injury to the operator or others.

Please read the instructions carefully and make sure you understand them before using the power cutter.

Always wear:
- Approved protective helmet
- Approved hearing protection
- Protective glasses or visor

Warning
Cutting creates a lots of dust which can cause inhalation damage. Use appropriate dust mask or respirator protection. Avoid breathing petrol fumes and exhaust gases. Ensure vacuum system is placed outdoors to vent fumes.

Warning
Sparks from the cutting blade can cause fire in combustible materials such as: petrol (gas), wood, dry grass etc.

Symbols in the Operator's Manual:

The power cutter is fitted with a stop switch. Make sure the engine is off prior to maintenance by depressing the stop switch to the “O” position until the machine stops. Do not carry out any maintenance when the engine is running.

Always wear approved protective gloves.

Regular cleaning is required.

Visual check.

Protective glasses or a visor must be worn.

WHAT IS WHAT

What is what on the Edge Powercutter

1. Cylinder Cover
2. Muffler
3. Fuel Tank
4. Starter throttle catch
5. Choke
6. Throttle trigger lockout
7. Stop switch
8. Water Tap
9. Cutting arm
10. Rear handle
11. Cutting blade
12. Throttle control
13. Combination spanner
14. Air filter cover
15. Blade guard
16. Starter handle
17. Operator's Manuel
18. Front handle
19. Starter
20. Decompression valve
21. Blade fixing bolt
22. Vacuum Shroud
23. Water supply line
24. Main water supply tap
25. Vacuum hose
26. Water connection
27. Vacuum connection
28. Water jet to guard
29. Water jets to blade

SAFETY INSTRUCTIONS

WARNING! Incorrect or careless use of a power cutter can turn it into a dangerous tool that can cause serious or even fatal injury. It is extremely important that you read and understand this manual.

PERSONAL PROTECTIVE EQUIPMENT

WARNING! When using a power cutter, protective equipment approved by the appropriate authorities must be used. Personal protective equipment does not eliminate the risk of accidents, however, it can reduce the effects of an injury in the event of an accident. Ask your dealer for help when choosing protective equipment.

- PROTECTIVE HELMET
- EAR PROTECTION
- PROTECTIVE GLASSES OR FULL FACE PROTECTION

- RESPIRATOR

- HEAVY-DUTY, FIRM GRIP PROTECTIVE GLOVES

- SNUG-FITTING, HEAVY-DUTY, COMFORTABLE CLOTHING THAT ALLOWS FULL FREEDOM OF MOVEMENT
- LEG PROTECTION (TO PROTECT AGAINST SPARKS AND CUTTING FRAGMENTS)

- ANTI-SLIP BOOTS WITH STEEL TOE CAPS

- FIRST AID KIT SHOULD ALWAYS BE ON HAND

THE POWER CUTTER'S SAFETY EQUIPMENT

This section describes the power cutter's safety equipment, its function and how checks and maintenance are carried out to ensure that it operates correctly. (See the chapter *"What is what"* to locate where this equipment is positioned on your power cutter.)

WARNING! Never use a power cutter with defective safety equipment. Follow the control, maintenance and service instructions described in this manual.

1 Anti-vibration system

Your power cutter is equipped with an anti-vibration system. This is designed to give as low vibration levels and comfortable usage as possible.

The power cutter's anti-vibration system reduces the transfer of vibration between the engine/cutting equipment and the operator. The engine body including the cutting equipment is suspended in a handle system via anti-vibration elements.

2 Stop switch

The engine is stopped by depressing the stop switch.

3 Muffler

WARNING! During use and for some time afterwards the muffler is very hot. Do not touch the muffler if it is hot!

The muffler is designed to give the lowest possible noise level and to direct the engine‘s exhaust fumes away from the user. The engine‘s exhaust fumes are hot and can contain sparks, which can lead to the outbreak of fire.

IMPORTANT INFORMATION! It is extremely important that the instructions for checking, maintaining and servicing the muffler are followed. (see the section *“Control, maintenance and service of the machines safety equipment“*).

4 Blade guard for the cutting blade

WARNING! Always check that the blade guard is correctly fitted before starting the machine.

The blade guard is mounted above the cutting blade and prevents cutting fragments from being thrown towards the user.

Control, maintenance and service of the machine‘s safety equipment

WARNING! All service and repairs to the power cutter require special training. This applies especially to the power cutter’s safety equipment. If the power cutter does not meet any of the controls listed below you should contact your service workshop.
The purchase of one of our products guarantees that professional repair and servicing will be carried out on it. If the point of purchase is not one of our servicing dealers, please ask for details of the closest service workshop.

1 Anti-vibration system

Check the anti-vibration elements regularly for material cracks and deformation.

Check that the anti-vibration elements are securely mounted between the engine unit and the handle system.

2 Stop switch

Start the engine and make sure that the engine stops when the stop switch is depressed.

3 Muffler

Never use a machine that has a defective muffler.

Check regularly that the muffler is secured to the engine body.

IMPORTANT INFORMATION! The machine is fitted with a catalytic converter. It is designed to run at high temperatures under normal operating conditions.

4 Blade guard for the cutting blade

Never use a defective blade guard or a blade guard that is not fitted correctly.

WARNING! Check that the cutting blade is fitted correctly and does not show signs of damage. A damaged cutting blade can cause personal injury.

WARNING! Never use a power cutter with defective safety equipment. The power cutter's safety equipment should be checked and maintained as described in this Operator's Manual. If your power cutter does not meet any of these criteria you should contact your service workshop.

GENERAL SAFETY INSTRUCTIONS

IMPORTANT INFORMATION!
Do not use the power cutter until you have read the entire contents of this Operator's Manual.
All servicing, in addition to the points listed in the section "*Control, maintenance and service of the machine's safety equipment*", should be carried out by trained service specialists.

- Use the equipment recommended in the chapter *"Personal protective equipment"*
- Never use the machine when you are tired, under the influence of medicines/drugs or alcohol.
- Do not lend the power cutter to anyone without providing this Operator's Manual. Ensure the person using the power cutter understands the information in this Operator's Manual.

Transport and storage

- Store the power cutter under lock and key so that it's out of reach for children and unauthorised persons.
- Do not store or transport the power cutter with the cutting blade fitted.

Fuel safety
(Filling/Fuel mixture/Storage)

WARNING! Exercise great care when handling fuel. Bear in mind the risk of fire, explosions and inhaling fumes. Allow power cutter to cool down for at least 5 minutes before refuelling.

- Never fill the power cutter while the engine is running.
- When refilling after use, allow at least 5 minutes for the power cutter to cool down.
- Provide good ventilation when filling or mixing fuel (gasoline and 2-stroke oil).
- Move the power cutter at least 3 m from the filling position before starting.
- Never start the power cutter:
  a) If you have spilt fuel on it. Wipe up all spillage.

  b) If you have spilt fuel on yourself or your clothes. Change your clothes.

  c) If there is a fuel leak. Make regular checks for leakage from the fuel cap and the fuel supply pipes.
- Store the power cutter and fuel so that any leakage or fumes do not risk coming into contact with sparks or naked flames. For example, electric machines, electric motors, electrical switches/power switches, heaters or the like.
- When storing fuel, approved containers intended for this purpose must be used.
- When storing the power cutter for long periods the fuel tank must be emptied. Contact your local fuel station to find out how to dispose of excess fuel.

WARNING! Use a fuel can with an anti-spill device. Fuel and fuel fumes are highly flammable. Think of the risks of fire, explosion and breathing in fumes. Stop the engine before refuelling and allow power cutter to cool down for at least 5 minutes. Do not overfill with fuel. Mop up any spills on the ground or the power cutter. If you spill fuel on yourself or your clothes, change your clothes. Move the power cutter at least 3 metres from the refuelling site before starting.

GENERAL WORKING INSTRUCTIONS

This section takes up the basic safety precautions for working with the power cutter. Follow these general working instructions, but never use a machine without the possibility of calling for help in the event of an accident.

Basic safety precautions

IMPORTANT INFORMATION! Never work with a power cutter that is defective or incorrectly adjusted. Do not work with a power cutter that is incomplete or where assembly has not been carried out in a satisfactory manner. Check that the cutting blade stops rotating when the throttle is released. If you encounter a situation where you are uncertain how to proceed you should ask an expert.
Avoid all usage which you consider to be beyond your capability.

- Check that no one is in the immediate vicinity when the machine is started or while working with the machine to ensure that people, animals or other things cannot affect your control of the power cutter.
- Avoid usage in unfavourable weather conditions, for example, thick fog, heavy rain, strong winds or extreme cold, etc. To work in bad weather conditions is tiring and can create dangerous circumstances, e.g. slippery surfaces.
- Never start to work with the power cutter before the working area is clear and you have a firm foothold. Look out for any obstacles with unexpected movement. Ensure when cutting that no material can become loose and fall, causing operating injury.Take great care when working on sloping ground.
- Make sure clothing and parts of the body do not come into contact with the cutting blade when the engine is started.
- Maintain a safe distance from the cutting blade when the engine is running.
- The blade guard should always be fitted before the engine is running.
- Ensure that the working area is sufficiently illuminated to create a safe working environment.
- Be aware that some working positions may create greater stress on the operator.
- Check the cutting area for buried cables and wires.

The exhaust contains poisonous fumes such as carbon monoxide. Neglect can result in serious injury or death. Always place the vacuum outdoors to vent the fumes

Cutting

WARNING! A safe distance from the power cutter is 15 metres. You are responsible that animals and onlookers are not in the working area. Do not start to work with the power cutter before the working area is clear and you have a firm foothold.

- Start cutting with the engine at full throttle.
- Always hold the power cutter firmly, with both hands. Hold the machine so that the thumb and fingers grip around the handle.

Over exposure to vibrations can result in blood-vessel or nerve injury to persons suffering with blood circulation problems. Seek medical attention if you experience physical symptoms that can be related to over exposure to vibrations. Examples of such symptoms are numbness, lack of feeling, “tickling“, “pricking“, pain, lack of or a reduction in normal strength, changes in the colour of the skin or its surfaces. These symptoms normally appear in the fingers, hands or wrists.

Cutting technique

The technique described below is of a general character. Check information for each blade regarding individual cutting characteristics.

1. Support the work piece in such away that you can predict what will happen and so it will not pinch.
2. Start cutting gently, do not force or squeeze the blade in.
3. Use a high blade speed.
4. Only use the blade’s cutting edge when cutting.
5. Always cut with the blade at right angles to the work piece.
6. To minimise dust and slurry always:
   a) cut with the bottom of the guard against the workpiece.
   b) cut with the guard close to the workpiece.
   c) choose a blade that doesn't protrude through the workpiece or place a cover over the place the blade will protrude.

WARNING!
Under all circumstances avoid cutting using the side of the blade; it will almost certainly be damaged, break and can cause damage & personal injury. Only use the cutting section.

WARNING!
Do not lean the blade to the side, this can cause the blade to jam or break with personal injury as a consequence.

Water cooling

WARNING! Water cooling, which should only be used on petrol-driven power cutters, cools the cutting blade and increases its service life as well as reducing dust formation. Among the disadvantages are difficulties at very low temperatures and damaging the floor and other sections of the building and risk for slippage.

Sharpening diamond blades

Blades can become dull when the wrong feeding pressure is used or when cutting some materials such as heavily reinforced concrete. To force a dull blade results in overheating and finally the loss of segments (part of the blade).

Sharpen against a soft material such as sandstone, silica or haydite brick.

Blade vibration

The blade can become out of shape (not round) and vibrate if a too high feeding pressure is used or if the blade is pressed into the work piece.

A lower feeding pressure ought to stop the vibration. Otherwise replace the cutting blade.

Kickback

Kickback can occur very suddenly and with great force. If the following directives are not followed, it can result in serious or even fatal injury.

If the sector of the blade illustrated below is used for cutting the blade can start to climb and kickback the power cutter upwards and backwards towards the user with immense force.

How to avoid kickback

1. Never cut with the segment highlighted in the diagram at the top right.
2. Keep a good balance and a firm foothold.
3. Use both hands and take a firm grip with the thumb and fingers around the handle.
4. Keep the work piece at a comfortable distance.
5. Use the cutter at full throttle.
6. Take care when inserting the blade in an existing cut.
7. Never cut above shoulder height.
8. Be alert to movement of the work piece or anything else that can occur, which could cause the cut to close and pinch the blade.

Pull in
Pull in occurs when the lower part of the blade is suddenly stopped or when the cut closes. (To avoid this see the section "*How to avoid kickback*" and *"Pinching/rotation"* below).

Pinching/rotation
Pinching occurs when the cut closes. The power cutter can be drawn suddenly and powerfully downwards.

How to avoid pinching
Support the work piece in such a way that the cut remains open during the cutting operation and when the cut is finished.

Check the speed of the drive shaft
Use a tachometer regularly to check the speed of the drive shaft when the cutter is running at working temperature and at full throttle without a load. The maximum speed is stated on the unit.

WARNING!
If the speed is higher than the maximum speed stated then the unit must be adjusted by an authorised service workshop before it is used.

Care and storage

General
Guarda's power cutters are robust and durable. However, as they are used for high speed operations all servicing should be carried out on time and as specified, so that the power cutter always works effectively and safely.

Read this Operator's Manual to determine which service routines you can carry out and ensure that all other service work is carried out by an authorised service workshop.

Power Cutter
Always handle the power cutter with care and store it with the blade removed.

Blades
- All blades should be removed from the cutter after use and stored carefully.
- Never use abrasive blades
- Blades must be stored on a firm, level surface. If blades are supplied with a backing pad then a spacer should be used to keep them flat.
- Avoid moisture and temperature extremes.
- Remove the blades before the power cutter is moved or transported.
- Inspect new blades for transport or storage damage.

CUTTING BLADES

General

The Guarda Edge Powercutter is designed to use 15 inch (380mm) diamond blades. 16 inch blades (400mm) will not fit and should never be used.

WARNING!
Only use diamond blades with a steel core blank. Never use abrasive blades.

High speed portable tools

Ensure all cutting blades comply with all the directives and requirements attributed to the specific type of power cutter

WARNING!
Never exceed the maximum working speed of a cutting blade.

Special blades

Some cutting blades are designed for stationary equipment and for use with attachments. These types of cutting blades must not be used on portable power cutters.

WARNING!
Never use a cutting blade for any other purpose than what it was intended for.

Always contact local authorities and make sure you are following applicable directives.

Blade Guard

Check that the guard is not cracked or shows signs of any other damage. Clean the inside of the guard before fitting a new blade. Check that the guard can be adjusted.

Diamond blades

Diamond blades are basically made in the same way as abrasive blades but are manufactured from industrial diamonds held together by a bonding agent.

DIAMOND BLADES, TYPES AND USES			
Diamond blade	**General characteristics**	**Material**	**Water cooling**
	Low cost per cutting operation. Less blade changes. Constant cutting depth. Less dust.	All brickwork, reinforced concrete and other composite materials. NOT recommended for metal.	Increases the blades service life.

WARNING!
Cool a diamond blade continously with water to prevent overheating, which can cause the blade to break and pieces being thrown off resulting in injury and damage.

Using diamond blades

Proceed as follows:

- Cool continually with water.
- Keep the blade sharp.
- Remove the blade when transporting the power cutter.

Avoid:

- Running the blade in the wrong direction.
- Forcing a dull blade or wedging the blade into a cut.
- Transporting the cutter with the blade fitted.
- Letting the blade fall on the work piece.

WARNING!
Never cut dry.
The saw is designed to cut wet.

Checking the drive shaft and flanges

- Check that the threads on the drive shaft are undamaged.
- Check that the contact surfaces of the cutting blade and flanges are flat, run correctly on the spindle and are free from foreign objects.

  Do not use flanges that are twisted, have damaged edges, are untrue or dirty. Do not use different size flanges.

Fitting the cutting blade

Place the blade onto the rear flange, (A). Align the blade centre with the rear flange (A) centre. Install flange (B) onto the blade and align the centres. Turn flange (B) so it locks into flange (A). Install the bolt and hand tighten.

The shaft can be locked using a screwdriver, steel pin or the like. This is slid in as far as possible. The blade is tightened clockwise.

Tightening torque for the bolt holding the blade is:
15-25 Nm (130-215 in.lb).

Blade guard

The blade guard should always be fitted on the power cutter.
The guard should be adjusted so that the rear section is close to the work piece. Cutting fragments and sparks are then collected by the guard and directed away from the user.

WARNING!
The Edge Powercutter is designed to use 15 inch blades.
16 inch blades should never be used

FUEL HANDLING

Fuelmix

IMPORTANT! The power cutter is equipped with a two-stroke engine and must always be run using a mixture of gasoline and two-stroke engine oil. It is important to accurately measure the amount of oil to be mixed to ensure that the correct mixture is obtained. When mixing small amounts of fuel, even small inaccuracies can drastically affect the ratio of the mixture.

Always provide for good ventilation when handling fuel.

Gasoline

- **This engine is certified to operate on unleaded gasoline.**
- Use good quality unleaded gasoline.
- The lowest recommended octane rating is 90. If you run the engine on lower octane rating than 90 so-called “knocking“ can occur. This leads to an increased engine temperature, which can result in a serious engine breakdown.
- When working at continuous high revs a higher octane rating is recommended.

Two-stroke oil

- For the best results use two-stroke oil, which is especially developed for power cutters. Mixing ratio 1:40 (2.5%).
- Never use two-stroke oil intended for water cooled outboard engines, so-called, outboard oil.
- Never use oil intended for four-stroke engines.

Gasoline	Oil 2.5%(1:40)
Lit.	Lit.
5	0,13
10	0,25
15	0,38
20	0,50
US gallon	US fl.oz.
1	3 1/4
2 1/2	8
5	16

Mixing

- Always mix the gasoline and oil in a clean container intended for fuel.
- Always start by filling half the amount of the gasoline to be used. Then add the entire amount of oil. Mix (shake) the fuel mixture. Add the remaining amount of gasoline.
- Mix (shake) the fuel mixture thoroughly before filling the saw’s fuel tank.
- Do not mix more than max. one month’s supply of fuel.
- If the saw is not used for some time the fuel tank should be emptied and cleaned.
- **This engine is certified to operate on unleaded gasoline.**

Fuelling

WARNING!The following precautions reduce the risk of fire:
- **Allow machine to cool down for at least 5 minutes before refuelling.**
- **Do not smoke or place any sources of heat in the vicinity of the fuel.**
- **Never refuel when the engine is running.**
- **Open the fuel cap slowly when fuelling so that any over pressure is released slowly.**
- **Tighten the fuel cap carefully after refuelling.**
- **Always move the machine from the fuelling place before starting.**

- Keep the handle dry, clean and free from oil and fuel.
- Clean around the fuel cap. Clean the fuel tank regularly. The fuel filter should be changed at least once per year Contamination in the tank can disrupt operations. Ensure that the fuel is well mixed by shaking the container before filling the tank.
- Always exercise care when filling the fuel. Move the power cutter at least three metres from the filling area before starting. Make sure the fuel cap is tightened.

Set up option 1 - With Guarda Electric Exhaust Vacuum

What is required?

A) Guarda Edge Power Cutter
B) Guarda Electric Exhaust Vacuum
(Comes with Kevlar connecting hose)

C) Pressured Water Supply
D) Power Outlet 220V/10A

E) 38mm/1.5” Guarda Slurry Hose*
F) 50mm/2” Guarda Exhaust Hose**
*(Max. length 5m/15ft) **(Max. length 60m/200ft)

Set up procedure

1) Connect Kevlar connecting hose to the Guarda Electric Exhaust Vacuum exhaust port. It has a bayonet type fitting that locks in a clockwise rotation.

2) Connect the 50mm/2” exhaust hose to the Kevlar connecting hose to exhaust the Edge engine fumes outside in a well ventilated place.You can extend the 50mm/2” Guarda Exhaust hose to a maximum of 60m/200feet.

3) Connect 38mm/1.5” slurry hose to the Guarda Electric Exhaust Vacuum inlet. (hose length not to exceed 5m/15 ft between Guarda Electric Exhaust Vacuum & Edge Powercutter.

4) Connect 38mm/1.5” slurry hose to Edge Powercutter.

5) Connect water hose to Edge Powercutter

6) Connect water hose to pressured water supply

7) Connect Guarda Electric Exhaust Vacuum power lead to power point.

The end of the exhaust hose must be placed outside in a well ventilated area

Set up option 2 - With Guarda Vacuum Generator

What is required?

A) Guarda Edge Power Cutter
B) Guarda Vacuum Generator
C) Pressured Water Supply
D) Guarda Slurry Interceptor
E) 38mm/1.5” Guarda Slurry Hose*
F) 50mm/2” Guarda Exhaust Hose**

*(Max. length 5m/15ft) **(Max. length 50m/165ft)

Set up procedure

1) Connect vacuum hose to Guarda Vacuum Generator using 50mm/2” camlock (maximum hose length of 50m/165ft with 50mm/2” hose).

2) Connect 50mm/2” exhaust hose from Vacuum Generator to Slurry Interceptor using 50mm/2“ camlock.

3) Connect 38mm/1.5” slurry hose to Slurry Interceptor vacuum inlet (hose length not to exceed 5m/15ft between Slurry Interceptor & Edge Powercutter.

4) Connect 38mm/1.5” slurry hose to Edge Powercutter

5) Connect water hose to Edge Powercutter

6) Connect water hose to pressured water supply

The Vacuum Generator must be placed outside in a well ventilated area

Set up option 3 - With conventional 2 or 3 motor electric wet vacuum with Slurry Interceptor

(use this option when more than 20m/65ft of hose is required)

What is required?

A) Guarda Edge Powercutter
B) 2 or 3 motor electric wet vacuum
C) Pressured Water Supply
D) Guarda Slurry Interceptor
E) 38mm/1.5” Guarda Slurry Hose*
F) 50mm/2” Guarda Exhaust Hose**
G) Power Outlet 220V/10A or 15A
H) 50mm/2“ Vacuum Adapter

*(Max. length 5m/15ft) **(Max. length 2 motor: 30m/100ft
3 motor: 40m/130ft)

Set up procedure

1) Insert 50mm/2” camlock Vacuum Adapter into 2 or 3 motor electric wet vacuum.

2) Connect 50mm/2” Guarda hose to the 50mm/2” camlock Vacuum Adapter.

3) Connect the 50mm/2“ Guarda hose to the Slurry Interceptor using 50mm/2” camlock (maximum hose length for 2 motor is 30m/100ft & for 3 motor is 40m/130ft).

4) Connect 38mm/1.5” slurry hose to Slurry Interceptor vacuum inlet. (Hose length not to exceed 5m/15 ft between Slurry Interceptor & Edge Powercutter).

5) Connect 38mm/1.5” slurry hose to Edge Powercutter.

6) Connect water hose to Edge Powercutter.

7) Connect water hose to pressured water supply.

8) Connect Electric Wet Vacuum power lead to power point.
(2 motor: 10 Amp powerpoint
3 motor: 15 Amp powerpoint).

The electric wet vacuum (B) must be placed outside in a well ventilated area

Set up option 4 - With conventional 2 or 3 motor electric wet vacuum

(use this option when less than 20m/65ft of hose is required)

What is required?

A) Guarda Edge Power Cutter
B) 2 or 3 motor electric wet vacuum
C) Pressured Water Supply
D) 38mm/1.5” Guarda Slurry Hose*
E) Power Outlet 220V/10A or 15A

*(Max. length 2 motor: 15m/50ft / 3 motor: 20m/65ft)

Set up procedure

1) Connect 38mm/1.5” slurry hose to electric wet vacuum (maximum hose length for 2 motor is 15m/50ft & for 3 motor is 20m/65ft.

2) Connect 38mm/1.5” slurry hose to Edge Powercutter.

3) Connect water hose to Edge Powercutter.

4) Connect water hose to pressured water supply.

5) Connect Electric Wet Vacuum power lead to power point.
(2 motor: 10 Amp powerpoint
3 motor: 15 Amp powerpoint).

The electric wet vacuum must be placed outside in a well ventilated area

POWERCUTTER, VACUUM & WATER - START AND STOP SEQUENCE

Starting Sequence

1. Make sure Vacuum System is turned on,

2. Turn water on maximum,

3. Start Guarda Edge Powercutter (see next page for Guarda Edge Powercutter starting instructions).

Stopping Sequence

1. Turn Guarda Edge Powercutter off (see next page for Guarda Edge Powercutter stopping instructions)

2. Turn water off,

3. After several minutes or when vacuum lines are clear of water and slurry turn off the Vacuum System.

Start and stop

WARNING! Before starting Power cutter, observe the following:

- **Do not start the power cutter without the cutting arm or cutting head fitted. Otherwise the clutch can come loose and cause personal injury.**
- **Always move the power cutter from the fuel filling area before starting.**
- **Ensure that you are standing firmly and that the cutting blade rotates freely.**
- **Make sure no unauthorised persons are within the working area.**

Starting a cold engine

IGNITION:
The machine is fitted with a stop switch that is normally in the on start (I) position.

CHOKE:
Pull out the choke.

STARTER THROTTLE CATCH:
Press in the throttle trigger lockout (A) and the throttle control (B) and thereafter the starter throttle catch (C). Release the throttle control and the throttle is locked in the half throttle position. The catch is released when the throttle control is pressed in all the way.

DECOMPRESSION VALVE:
Press in the valve to reduce the pressure in the cylinder, this makes starting the power cutter easier. The decompression valve should always be used when starting. When the power cutter has started, the valve automatically returns to its original position.

Starting a warm engine

Use the same procedure as for starting cold engine but without choke. Press in the throttle trigger lockout and the throttle control and thereafter the starter throttle catch.

Note:
When starting a warm engine after refueling, you may need to use the choke.

Start

WARNING! Make sure the cutting blade can rotate freely before starting the engine

Take hold of the front handle using your left hand. Place your right foot on the lower section of the rear handle and press the power cutter against the ground.

Grip the starter with your right hand, and slowly pull the starter cord out until you feel some resistance (the pawls grip) now pull quickly and powerfully.

NOTE! Do not pull out the starter cord completely and do not release the starter from the fully extended position. This can damage the power cutter.

When the engine starts, quickly apply full throttle and the starter throttle catch will automatically disengage.

Stop

The engine is stopped by depressing the stop switch to the "o" position.
Depress until the engine is off.

OPERATING TECHNIQUE TO MINIMISE DUST AND SLURRY

The Edge powercutter uses water and vacuum to control slurry, dust and exhaust fumes. Make sure you follow the set up procedures outlined on page 15 and 16.

The blade guard has 2 water supply jets.

One water jet sprays constantly on the base of the blade guard when the water supply is turned on. This helps to create a fluid mixture of cutting residue to minimise vacuum line clogging. This also ensures there is adequate cooling for the exhaust gases.

The second water jet is directly onto the cutting blade. Water volume can be controlled by the tap on the saw front handle.

The water jets are designed and positioned to supply water efficiently onto the blade so that when the blade rotates the water feeds onto the cutting area of the blade.

1 **Before cutting.** Turn on the water supply to the blade. Adjust water amount. Rev the engine and make sure an adequate of water is coming off the blade. A light spray is sufficient.

2 **Starting the cut.** Ensure that the bottom of the guard is close to the cutting surface and move the blade into the material being cut while keeping the bottom of the blade guard against the cutting surface.

3. **During cutting.** Keep the blade guard against the cutting surface. To help achieve this the blade guard is designed to rotate within the vacuum shroud so that the orientation of the saw can change easily while keeping the guard against the wall.

WARNING!
Always ensure that the water supply, and the saws main tap are turned on full and the vacuum is on before cutting, to minimise the chance of slurry blockages. The main indicator of a blockage will be slurry running out from the front of the blade guard. If this occurs immediately stop the saw and clear the blockage to ensure heat buildup from the exhaust does not melt the hoses.

Carburetor

Your Guarda product has been designed and manufactured to specifications that reduce harmful emissions.
After your unit has been run for 8-10 tanks of fuel the engine has broken in. To ensure that your unit is at peak performance and producing the least amount of harmful emissions after break in, have your authorized servicing dealer, with a revolution counter at his disposal, check your carburetor for optimum operating conditions.

Functioning, Final setting

WARNING! Do not start the power cutter without the cutting arm or cutting head fitted. Otherwise the clutch can come loose and cause personal injury.

Operation

- The carburetor governs the engine speed via the throttle. Air/fuel are mixed in the carburetor

Jets

The carburetor is equipped with fixed jets to ensure the engine always receives the correct fuel air mixture.
If the engine lacks power or accelerates poorly do the following:
- Inspect or, if necessary, replace the air filter.
- If this does not help, contact an authorised service workshop.

Final setting of the idling speed T

Adjust the idling speed with the screw T. If it is necessary to re-adjust, first turn the idle speed adjusting screw T clockwise until the blade starts to rotate. Then turn counter clockwise until the blade stops. When correctly adjusted the saw will run in any orientation.There should also be a good margin between the idle speed setting and the engine speed required to start the blade rotating.

Recommended idling speed: 2,500 rpm

Contact your servicing dealer, if the idle speed setting cannot be adjusted so that the blade stops. Do not use the power cutter until it has been properly adjusted or repaired.

Fuel filter

- The fuel filter sits inside the fuel tank.
- The fuel tank must be protected from contamination when filling. This reduces the risk of operating disturbances caused by blockage of the fuel filter.
- The filter cannot be cleaned but must be replaced with a new filter when it is blocked. **The filter should be changed at least once per year.**

Air filter

The air filter should be cleaned regularly removing dust and dirt to avoid:
- Carburettor malfunction
- Starting problems
- Reduced engine power
- Unnecessary wear to engine parts
- Abnormal fuel consumption

The air filter system consists of a main filter and a back-up filter:

1) The main-filter is an oiled foam filter that is easily accessible under the filter cover A. When used in dusty conditions, this filter should be checked/replaced after every second tank of fuel. The filter must be cleaned and oiled regularly to obtain a satisfactory filtering effect. There is a special oil produced for this purpose.

- Remove the filter. Wash the filter carefully in tepid, soapy water. After cleaning rinse the filter thoroughly in clean water. Squeeze out the filter and let the filter dry. NOTE! Compressed air at a high pressure can damage the foam.
- Oil the filter carefully. It is extremely important that the entire filter is saturated in oil.

2) The back-up filter is a paper filter and is accessible from under cover B. This filter should be changed/cleaned when the engine's output drops or after 1-2 weeks. The filter is cleaned by shaking or carefully using compressed air. Note the filter must not be washed!

A filter used for a long period of time can never be completely cleaned. Therefore all air filters must be replaced periodically with a new filter. **A damaged air filter must always be replaced.**

IMPORTANT INFORMATION!
Insufficient care of the air filter will cause deposits on the spark plug resulting in abnormal wear to engine parts.

Starter

WARNING!
- **The recoil spring sits in its tensioned position in the starter housing and can, with careless handling, fly out and cause personal injury.**
- **When replacing the recoil spring or the starter cord great care should be exercised. Always wear protective glasses.**

Replacing a broken or worn starter cord

- Loosen the bolts that hold the starter against the crankcase and lift off the starter unit.
- Pull out the cord approx. 30 cm and lift it out of the cut-out in the starter-pulley's periphery. Reset the recoil spring by allowing the pulley to slowly rotate backwards.
- Loosen the screw in the centre of the starter-pulley and lift off the pulley. Insert and secure the starter cord in the starter pulley. Wind on approx. 3 turns of the cord on the pulley. Fit the pulley on the recoil spring so that the end of the recoil spring hooks on the pulley. Fit the screw in the centre of the pulley. Thread the starter cord through the hole in the starter housing and the starter handle. Tie a good knot on the end of the cord.

Tensioning the recoil spring

- Lift up the starter cord from the cut out on the pulley and turn the pulley approx. 2 turns clockwise.

  NOTE! Ensure the starter pulley can be turned at least a further 1/2 turn when the starter cord is fully extended.

Replacing a broken recoil spring

- Lift the starter pulley (see *"replacing a broken or worn starter cord"*).
- Loosen the screws holding the spring cassette.
- Disassemble the recoil spring by tapping the pully (with its inside facing down) lightly against a working bench or similar. If the spring pops out when assembling, it should be mounted again, out and in towards the centre.
- Lubricate the recoil spring with thin oil. Assemble the starter pulley, and tension the recoil spring.

Fitting the starter

- Fit the starter by first pulling out the starter cord and then placing the starter in position on the crankcase. Now slowly release the starter cord so that the pawls grip in the pulley.
- Fit and tighten the screws that hold the starter.

Ignition system

IMPORTANT INFORMATION!
This power cutter has an ignition system with an integrated speed governor .
The power cutter may only be used with such an ignition system to prevent the risk of over revving.

Spark plug

The condition of the spark plug is affected by:
- An incorrect carburetor setting.
- An incorrect fuel mixture (too much oil).
- A dirty air filter.

These factors cause deposits on the spark plug electrode that may result in malfunction or starting difficulties.

- **If the machine is low on power, difficult to start or runs poorly while idling always check the spark plug first.** If the spark plug is dirty, clean it and at the same time check that the electrode gap is 0,5 mm (.020"). The spark plug should be changed after about one month of operation or earlier if necessary.

NOTE! Always use the recommended type of spark plug. (see chapter *"Technical data"*)! An incorrect spark plug can damage the cylinder/piston.

Cooling system

To maintain as low an operating temperature as possible the power cutter is equipped with a cooling system.

The cooling system consists of:

1. An air intake on the starter unit.
2. Air flow guide.
3. Cooling fins on the flywheel.
4. Cooling fins on the cylinder
5. Cylinder cover (directs cold air onto the cylinder).

Clean the cooling system using a brush at least once a week, and in difficult conditions, more often. A dirty or blocked cooling system leads to the engine overheating resulting in damage to the cylinder and piston.

Muffler

The muffler is designed in order to reduce the noise level and to direct the exhaust gases away from the operator. The exhaust gases are hot and can contain sparks, which may cause fire if directed against dry and combustible material.

Never use a saw with a clogged or defective muffler.

IMPORTANT INFORMATION!The power cutter is fitted with a catalytic converter. It is designed to run at high temperatures under normal operating conditions.

Clearing hose blockages

1 Make sure vacuum hoses are clear by checking for maximum suction where you would normally connect to the saw.

2 To clear blockage in the guard turn guard so that it is clear of the vacuum shroud and then wash thoroughly with water.

3 To clear blockage in vacuum shroud and hose. Squirt water up inside the vacuum shroud. **WARNING! ensure vacuum line is connected to the saw and the vacuum is on to prevent water flooding the engine.**

4 If blockage remains in the hose the hose will need to be dismantled from the muffler.

Once hose is removed It can be washed as required to clear the blockage. Once blockage is cleared the unit can be reassembled

WARNING! never inject water into the muffler port. Water in the muffler may flood the engine.

Clearing exhaust blockages

1 Dismantle hose from exhaust

2 Scrape the exhaust port with a small screwdriver and remove any baked on slurry build-up.

3 Start engine and blow exhaust port clear.

4 Re-assemble the hose onto the exhaust port.

MAINTENANCE

Below follows some general maintenance instructions.
If you need further information please contact your service workshop.

Daily maintenance

1. Check that throttle components work correctly from a safety view point (throttle and starter throttle catch).
2. Clean the main filter.
3. Check the tension of the drive belt.
4. Check the condition of the cutting blade.
5. Check the condition of the blade guard.
6. Check the starter and the starter cord; clean the outside of the starter's air intake.
7. Check that all nuts and bolts are tightened correctly.
8. Check the function of the stop switch.

Weekly maintenance

9. Check the back-up paper filter.
10. Check that the handles and the anti-vibration elements are not damaged.
11. Clean the spark plug. Check that the electrode gap is 0.5 mm.
12. Clean the cooling fins on the flywheel. Check the starter and recoil spring.
13. Clean the cooling fins on the cylinder.
14. Check the muffler.
15. Check the carburetor function.

Monthly maintenance

16. Check the clutch drum, drive-pulley, and clutch springs with regard to wear.
17. Clean the outside of the carburetor
18. Check the fuel filter, fuel hose and change if necessary.
19. Clean the inside of the fuel tank.
20. Check all cables and connections.

TECHNICAL DATA

Engine

Cylinder volume, cm^3/inch	93,6/5,7
Cylinder bore, mm/inch	ø 56/2,2"
Stroke, mm/inch	38/1,5"
Idle speed, rpm	2 500 rpm
Recommended max. speed, unloaded, rpm	9 500
Power, kW	4,0

Ignition system

Manufacturer	Walbro
Type of ignition system	CDI
Spark plug	NGK BPMR7A
Electrode gap, mm/inch	0,5 (.020")

Fuel and lubrication system

Manufacturer	Walbro
Carburetor type	WJ129
Fuel capacity, litre/US Pint	1,0/2,1

Weight

Without fuel and cutting blade, kg/Lbs

15" (ø 380 mm)	11,75 / 25,9

Cutting equipment

Cutting blade	Gear ratio	Max. peripherical speed
15" (ø 380 mm)	0,42	100 m/s

WARNING! Cutting, especially when DRY cutting, generates dust that comes from the material being cut, which frequently contains silica. Silica is a basic component of sand, quartz, brick day. granite and numerous other minerals and rocks. Exposure to excessive amount of such dust can cause:

Respiratory disease (affecting your ability to, breath). including chronic bronchitis, silicosis and pulmonary fibrosis from exposure to silica. These diseases may be fatal.

Skin irritation and rash.

Cancer according to NTPF, and IARC/ 1 National Toxicology Program. International Agency for Research on Cancer**

Take Precautionary steps:

Avoid inhalation of and skin contact with dust, mist and fumes.

Wear and ensure that all bystander's wear appropriate respiratory protection such as dust masks designed to filter out microscopic particles.

Wet cut to minimize dust.

GUARDA

EDGE POWERCUTTER