KLUTCH

14in. 4.7hp Gas Powered Concrete Cut Saw

Owner Manual



WARNING: Read carefully and understand all ASSEMBLY AND OPERATION INSTRUCTIONS before operating. Failure to follow the safety rules and other basic safety precautions may result in serious personal injury.

Item #114832

READ & SAVE THESE INSTRUCTIONS

Thank you very much for choosing a Klutch product!

For future reference, please complete the owner's record below:

Serial Number/Lot Date Code: _____

Purchase Date: _____

Save the receipt, warranty, and this manual. It is important that you read the entire manual to become familiar with this product before you begin using it.

This Cement Mixer is designed for certain applications only. Northern Tool & Equipment is not responsible for issues arising from modification or improper use of this product such as an application for which it was not designed. We strongly recommend that this product not be modified and/or used for any application other than that for which it was designed.

For technical questions, please call **1-800-222-5381**.

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Intended Use

This gas power 14-Inch Concrete Cutter Saw is ideal for quick and easy on-site cutting and adjustment of building elements. Count on it to deliver high performance, durability, low maintenance, reliable operation and long uptime.

Packaging Contents

- Concrete Cutter Saw (1)
- 14in. Blade (1)
- Water Hose (1)
- Tank(1)
- Replace Belt (1)
- Replace Air Filter (1)

Technical Specifications

Property	Specification
Engine	1E74F/2-stroke
Engine Displacement	74cc
Theoretical Horsepower	4.7HP
Fuel Tank Capacity	37.2 Oz
Blade Size	14 in.
Arbor Size	1 in.
Cutting Depth	5 in.
Speed Rating	9,500 RPM
Max. Spindle Speed with Cutting Blade	4,700 RPM

Important Safety Information

⚠WARNING

- Read and understand all instructions. Failure to follow all instructions may result in serious injury or property damage.
- The warnings, cautions, and instructions in this manual cannot cover all possible conditions or situations that could occur. Exercise common sense and caution when using this tool. Always be aware of the environment and ensure that the tool is used in a safe and responsible manner.
- Do not allow persons to operate or assemble the product until they have read this manual and have developed a thorough understanding of how it works.
- Do not modify this product in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the product. There are specific applications for which the product was designed.
- Use the right tool for the job. DO NOT attempt to force small equipment to do the work of larger industrial equipment. There are certain applications for which this equipment was designed. It will be a safer experience and do the job better at the capacity for which it was intended. DO NOT use this equipment for a purpose for which it was not intended.

- Industrial or commercial applications must follow OSHA requirements.

⚠WARNING

- This product may contain chemicals known to the state of California to cause cancer, birth defects, or other reproductive harm.
- Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the state of California to cause cancer, birth defects, or other reproductive harm. Some examples of these chemicals are:
  - - lead from lead-based paints,
  - - crystalline silica from bricks and cement and other masonry products, and
  - - arsenic and chromium from chemically-treated lumber.
- Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well-ventilated area, and work with approved safety equipment, such as dust masks that are specially designed to filter out microscopic particles.
- Handling power cords on corded products may expose you to lead, a chemical known to the state of California to cause cancer and birth defects or other reproductive harm. Wash your hands after handling.

⚠WARNING

WORK AREA SAFETY

- Inspect the work area before each use. Keep work area clean, dry, free of clutter, and well-lit. Cluttered, wet, or dark work areas can result in injury. Using the product in confined work areas may put you dangerously close to cutting tools and rotating parts.
- Do not use the product where there is a risk of causing a fire or an explosion; e.g., in the presence of flammable liquids, gases, or dust. The product can create sparks, which may ignite the flammable liquids, gases, or dust.
- Do not allow the product to come into contact with an electrical source. The tool is not insulated and contact will cause electrical shock.
- Keep children and bystanders away from the work area while operating the tool. Do not allow children to handle the product.
- Be aware of all power lines, electrical circuits, water pipes, and other mechanical hazards in your work area. Some of these hazards may be hidden from your view and may cause personal injury

and/or property damage if contacted.

⚠WARNING

PERSONAL SAFETY

- Stay alert, watch what you are doing, and use common sense when operating the tool. Do not use the tool while you are tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating the tool may result in serious personal injury.
- Dress properly. Do not wear loose clothing, dangling objects, or jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry, or long hair can be caught in moving parts. Air vents on the tool often cover moving parts and should be avoided.
- Wear the proper personal protective equipment when necessary. Use ANSI Z87.1 compliant safety goggles (not safety glasses) with side shields, or when needed, a face shield. Use a dust mask in dusty work conditions. Also use non-skid safety shoes, hardhat, gloves, dust collection systems, and hearing protection when appropriate. This applies to all persons in the work area.
- Do not overreach. Keep proper footing and balance at all times.

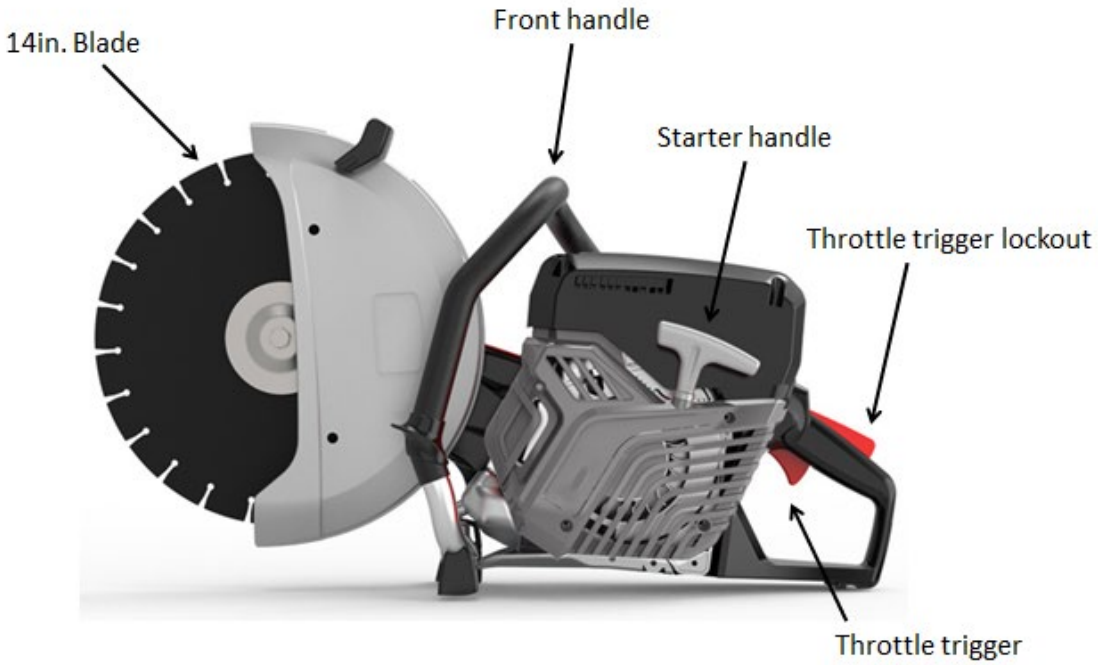
⚠CAUTION

PRODUCT USE AND CARE

- Do not force the product. Products are safer and do a better job when used in the manner for which they are designed. Plan your work, and use the correct product for the job.
- Check for damaged parts before each use. Carefully check that the product will operate properly and perform its intended function. Replace damaged or worn parts immediately. Never operate the product with a damaged part.
- Store the product when it is not in use. Store it in a dry, secure place out of the reach of children. Inspect the tool for good working condition prior to storage and before re-use.
- Use only accessories that are recommended by the manufacturer for use with your product. Accessories that may be suitable for one product may create a risk of injury when used with another tool. Never use an accessory that has a lower operating speed or operating pressure than the tool itself.
- Keep guards in place and in working order. Never operate the product without the guards in place.

Main Parts of Product

Subassembly
14in. Blade
Front handle
Starter handle
Throttle trigger lockout
Throttle trigger



Safety Equipment

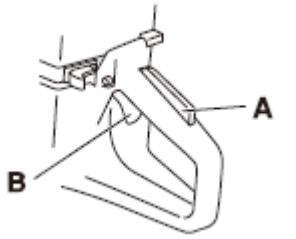
⚠WARNING

- Never use a machine that has faulty safety equipment! If your machine fails any checks contact your service agent to get it repaired.
- The engine should be switched off, and the stop switch in STOP position.

This section describes the machine's safety equipment, its purpose, and how checks and maintenance should be carried out to ensure that it operates correctly.

Throttle trigger lockout

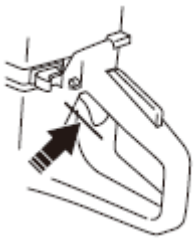
The throttle trigger lock is designed to prevent accidental operation of the throttle. When the lock (A) is pressed in this releases the throttle (B)



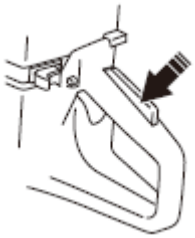
The trigger lock remains pressed in as long as the throttle is pressed. When the grip on the handle is released the throttle trigger and the throttle trigger lock both return to their original positions. This is controlled by two independent return spring systems. This means that the throttle trigger is automatically locked in the idle position

Checking the throttle lockout

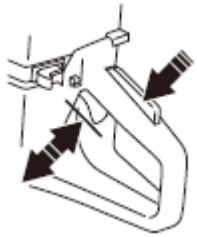
- Make sure that the throttle trigger is locked at idle setting when the throttle trigger lockout is released.



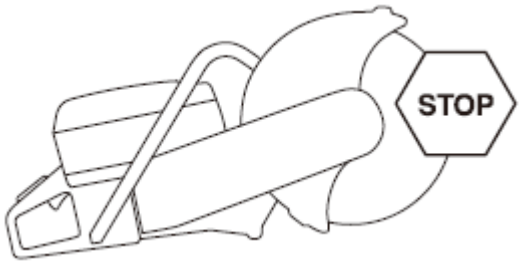
- Press the throttle lockout and make sure it returns to its original position when you release it



- Check that the throttle trigger and throttle lockout move freely and that the return springs work properly

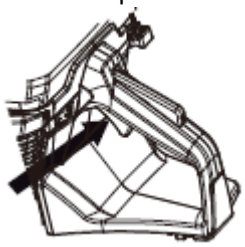


- Start the power cutter and apply full throttle. Release the throttle control and check that the cutting blade stops and remains stationary. If the cutting blade rotates when the throttle is in the idle position you should check the carburetor's idle adjustment. See instructions in the section "Maintenance"



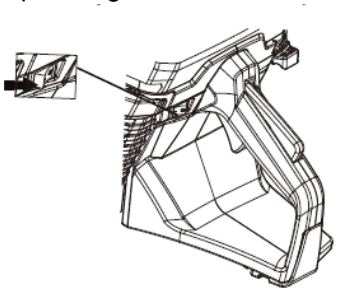
Stop switch

Use the stop switch to switch off the engine.



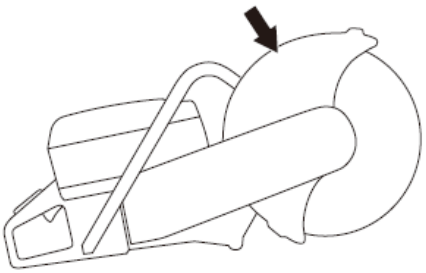
Checking the stop switch

- Start the engine and make sure the engine stops when you move the stop switch to the stop setting



Blade guard

This guard is fitted above the cutting blade and is designed to prevent parts of the blade or cutting fragments from being thrown towards the user

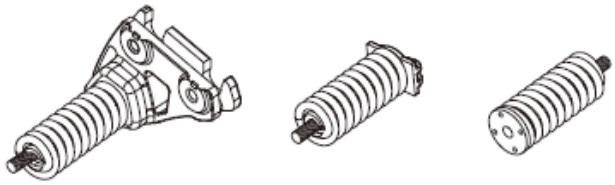


Checking the blade and the blade guard

- Check that the guard over the cutting blade is not cracked or damaged in any other way. Replace when damaged
- Check that the cutting blade is fitted correctly and does not show signs of damage . A damaged cutting blade can cause personal injury.

Vibration damping system

- Your machine is equipped with a vibration damping system that is designed to minimize vibration and make operation easier
- The machine's vibration damping system reduces the transfer of vibration between the engine unit/cutting equipment and the machine's handle unit. The engine body, including the cutting equipment, is insulated from the handles by vibration damping units



Checking the vibration damping system

- Check the vibration damping units regularly for cracks or deformation. Replace them if damaged
- Check that the vibration damping element is securely attached between the engine unit and handle unit.

Muffler

The muffler is designed to keep noise levels to a minimum and to direct exhaust fumes away from the user

Inspecting the muffler

Check regularly that the muffler is complete and secured correctly

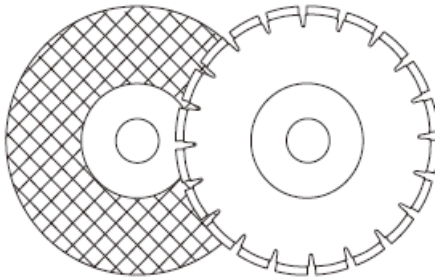


Cutting Blade

⚠WARNING

- A cutting blade may burst and cause injury to the operator.
- The cutting blade manufacturer issues warnings and recommendations for the use and proper care of the cutting blade. Those warnings come with the cutting blade. Read and follow all instructions from the cutting blade manufacturer.
- A cutting blade should be checked before it is assembled on the saw and frequently during use. Look for cracks, lost segments (diamond blades) or pieces broken off. Do not use a damaged cutting blade.
- Test the integrity of each new cutting blade by running it at full throttle for about 1 minute.

Cutting blades are available in two basic designs, abrasive blades and diamond blades



High-quality blades a「e often most economical. Lower quality blades often have inferior cutting capacity and a shorter service life, which results in a higher cost in relation to the quantity of material that is cut.

Make sure that the right bushing is used for the cutting blade to be fitted on the machine. See the instructions under the heading Fitting the cutting blade

Suitable cutting blades

Cutting Blade	
Abrasive blades	Yes
Diamond blades	Yes
Toothed blades	Yes

Cutting blades for different materials

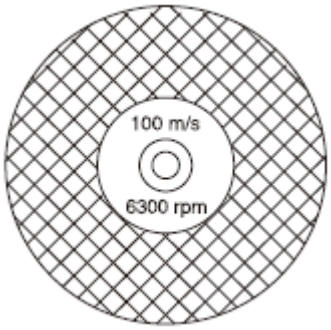
Follow the instructions supplied with the cutting blade concerning the suitability of the blade for various applications, or consult your dealer in case of doubts

	Concrete	Metal	Plastic	Cast Iron
Abrasive blades	Yes	Yes	Yes	Yes
Diamond blades	Yes	Yes		Yes

Hand held, high speed machines

- Many cutting blades that might fit this power cutter are intended for stationary saws and have a lower speed rating than is needed for this hand-held saw. Cutting blades with a lower speed rating shall never be used on this saw.
- Check that the blade is approved for the same or higher speed according to the approval plate of the engine. Never use a cutting blade with a lower speed rating than that of the

power cutter.

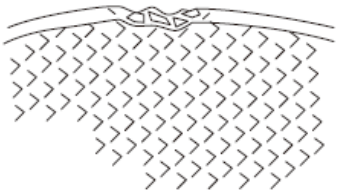


Blade vibration

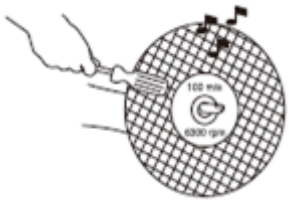
- The blade can become out-of-round and vibrate if an excessive feed pressure is used
- A lower feed pressure can stop the vibration. Otherwise replace the blade

Abrasive blades

- The cutting material on abrasive blades consists of grit bonded using an organic binder. "Reinforced blades" are made up of a fabric or Ii 讠丁 e base that prevents total breakage at maximum working speed if the blade should be cracked or damaged
- A cutting blade's performance is determined by the type and size of abrasive corn, and the type and hardness of the bonding agent
- Ensure the cutting blade is not cracked or damaged



- Test the abrasive blade by hanging it on your finger and tapping it lightly with a screwdriver or the like, If the blade does not produce a resonant , ringing sound it is damaged



Abrasive blades for different materials

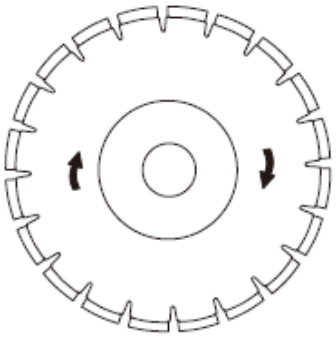
Blade type	Material
Concrete blade	Concrete, asphalt, stone masonry, cast iron, aluminum, copper, brass, cables, rubber, plastic , etc.
Metal blade	Steel, steel alloys and othe「hard metals.

Diamond blades

Diamond blades consist of a steel core provided with segments that contain industrial diamonds

Diamond blades ensure lower costs pe 「cutting operation, fewer blade changes and a constant cutting depth.

When using diamond blades make su「e that it rotates in the d「i ection indicated by the arrow on the blade



Diamond blades for different materials

- Diamond blades are ideal for mason「y, reinforced concrete and other composite materials
- Diamond blades are available in several hardness classes.
- Special blades should be used when cutting metal Ask your dealer for help in choosing the right product

Sharpening diamond blades

- Always use a sharp diamond blade
- Diamond blades can become dull when the wrong feeding pressure is used or when cutting certain materials such as heavily reinforced concrete Working with a dull diamond blade causes overheating, which can result in the diamond segments coming loose
- Sharpen the blade by cutting in a soft material such as sandstone or brick.

Diamond blades and cooling

- During cutting the friction in the cut causes the diamond blade to be heated up. If the blade is allowed to get too hot this can result in loss of blade tensioning or core cracking

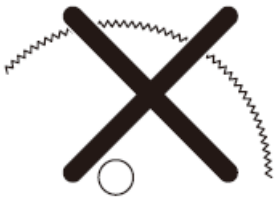
Diamond blades for dry cutting

- Although no water is required for cooling , dry cutting blades must be cooled with air flow around the blades For this reason dry cutting blades are recommended only for intermittent cutting. Every few seconds of cutting the blade should be allowed to run 'free" with no load to allow the air flow around the blade to dissipate the heat

Diamond blades for wet cutting

- Wet cutting diamond blades must be used with water to keep the blade core and segments cool during sawing
- Wet cutting blades should NOT be used dry.
- Using wet cutting blades without water can cause excessive heat build-up, resulting in poor performance, severe blade damage and is a safety hazard

Toothed blades, carbide tipped blades and emergency situations



Use of this power cutter with a carbide tipped blade is a violation of work safety regulations.

Due to the hazardous nature and exigent circumstances involved with fire fighting and rescue operations conducted by the various highly trained public safety forces, safety professionals (fire departments), we are aware that they may use this power cutter with carbide tipped blades in certain emergency situations due to the ability of carbide tipped blades to cut many different types of obstructions and materials in combination without having to take time to switch blades or machines. When using this power cutter be aware at all times that carbide tipped blades are more kickback prone than abrasive or diamond blades if not used properly. Carbide tipped blades can also throw pieces of material away from the blade.

For these reasons, a power cutter equipped with a carbide tipped blade should never be used except by highly trained public safety professionals who are aware of the risks associated with its use and then only in those exigent circumstances when other tools are deemed inefficient and ineffective to for fire or rescue operations. A power cutter equipped with carbide tipped blade should never be used to cut wood in non-rescue operations.

Assembling and Adjustments

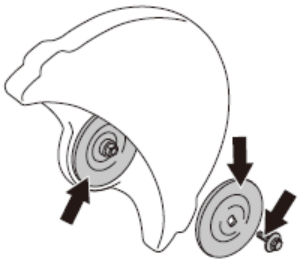
⚠WARNING

- Do not start the engine during the entire assembly

1. Checking the spindle shaft and flange washers.

When the blade is replaced with a new one, check the flange washers and the spindle shaft

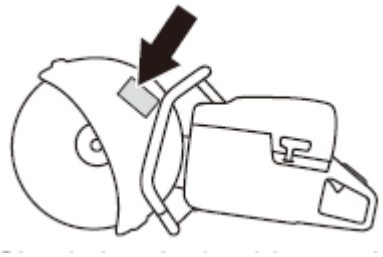
- Check that the threads on the spindle shaft are undamaged.
- Check that the contact surfaces on the blade and the flange washers are undamaged, of the correct dimension, clean, and that they run properly on the spindle shaft.



Do not use warped, notched, indented or dirty flange washers. Do not use different dimensions of flange washers.

2. Checking the arbor bushing.

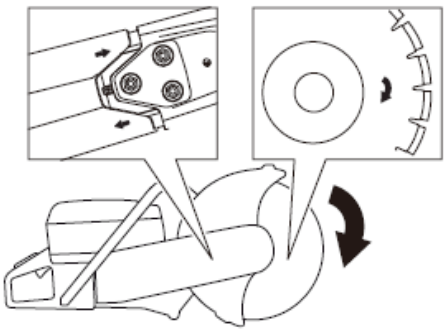
The arbor bushings are used to fit the machine to the center hole of the cutting blade. The machine is supplied with either a bushing that can be flipped over to fit blades with either 20 mm or 1" (25,4 mm) center holes, o「 with a fixed 20 mm bushing. A decal on the blade guard indicates which bushing has been factory fitted together with appropriate blade specification)



- Check that the bushing on the machine's spindle shaft corresponds with the center hole of the cutting blade The blades are marked with the diameter of the center hole.

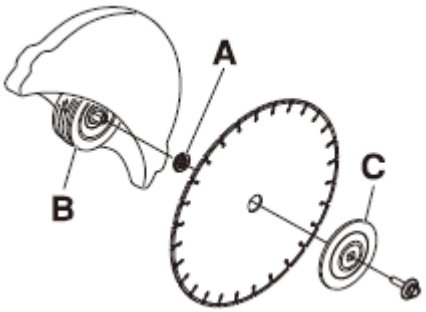
3. Checking the direction of the blade rotation

When using diamond blades make sure that it rotates in the direction indicated by the arrow on the blade. The direction of rotation for the machine is shown by arrows on the cutting arm.

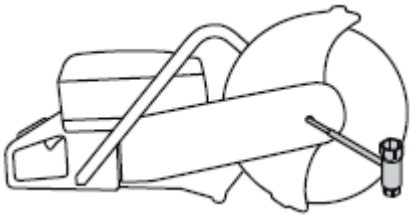


4. Fitting the cutting blade

- The blade is placed on the bushing (A) between the inner flange washer (B) and the flange washer (C) The flange washer is turned so that it fits on the axle.



- Lock the shaft. Insert a tool in the hole in the cutting head and rotate the blade until it is locked.

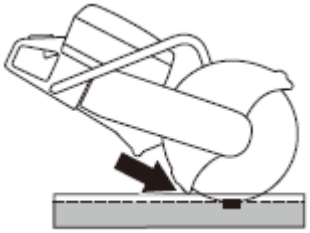


- Tightening torque for the bolt holding the blade is: 25 Nm (215 in.lb)

5. Blade guard

The guard for the cutting equipment should be adjusted so that the rear section is flush with the work piece. Spatter and sparks from the material being cut are then collected up by the guard and led away from the user.
The blade guard is friction locked.

- Press the ends of the guard against the work piece or adjust the guard with the adjustment handle. The guard must always be fitted on the machine.

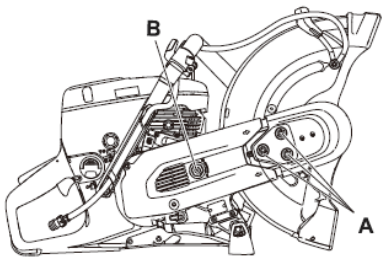


6. Reversible cutting head

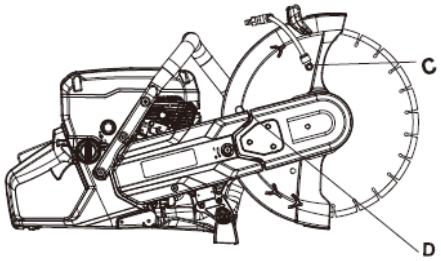
The machine is fitted with a reversible cutting head allowing cutting close to a wall or at ground level, restricted only by the thickness of the blade guard. In the event of a kickback it is harder to control the machine when cutting with the cutting head reversed. The cutting blade is further away for the center of the machine which means the handle and the cutting blade is no longer in alignment. It is more difficult to restrain the machine if the blade gets jammed or stuck in its kick back danger zone. See under the "Kickback" heading in the "Operating" section for additional information.

Some of the machine's good ergonomic features are jeopardized such as balance. Cutting with the cutting head reversed should only occur with cuts that are not possible in a standard manner.

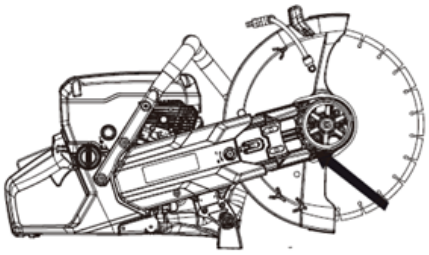
- Loosen the three nuts (A) holding the upper belt gua「d. Turn the belt tensioner (B) to position "O" to release the tension.



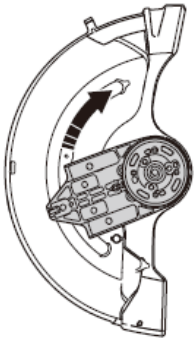
- Remove the upper belt guard
- Disconnect the water hose nipples and handle from the blade guard (C). Remove the stop (D)



- The cutting head is now loose and can be removed from the machine. Remove the belt on the belt pulley.



- Rotate the bearing housing to opposite direction and reassemble the stop.



Fuel Handing

⚠WARNING

- NOTICE! The machine is equipped with a two-stroke engine and must always be run using a mixture of petro land two-stroke 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.
- Use good quality unleaded or leaded petrol. The lowest octane recommended is 90 (RON). If you run the engine on a lower octane grade than 90 so- called knocking can occur. This gives rise to a high engine temperature, which can result in serious engine damage. When working at continuous high revs a higher octane rating is recommended.

1. Fuel

We recommends the use of alkylate fuel ,either Aspen two-stroke fuel or environmental fuel for four-stroke engines blended with two-stroke oil as set out below. Note that carburetor adjustment may be necessary when changing the type of fuel (see the instructions under the heading Carburetor) Ethanol blended fuel , E10 may be used (max 10% ethanol blend). Using ethanol blends higher than E10 will create lean running condition which can cause engine damage

2. Two-stroke oil

- For best results and performance use two-stroke engine oil, which is specially formulated for our air-cooled two-stroke engines
- Never use two-stroke oil intended for water-cooled engines, sometimes referred to as outboard oil (rated TCW).
- Never use oil intended for four-stroke engines

3. Mixing

- Always mix the petrol and oil in a clean container intended for fuel.
- Always start by filling half the amount of the petrol to be used. Then add the entire amount of oil.
- Mix (shake) the fuel mixture. Add the remaining amount of petrol.
- Mix (shake) the fuel mixture thoroughly before filling the machine's fuel tank.
- Do not mix more than one month's supply of fuel at a time
- Mixing Ratio

Petrol, liter	Two-stroke oil, liter 2%(1:50)
5	0,10
10	0,20
15	0,30
20	0,40

NEVER START THE MACHINE:

- If you have spilled fuel or engine oil on the machine Wipe off the spill and allow the

remaining fuel to evaporate

- If you have spilled fuel on yourself or you clothes, change your clothes. Wash any part of your body that has come in contact with fuel. Use soap and water
- If the machine is leaking fuel. Check regularly for leaks from the fuel cap and fuel lines
- Unless the fuel cap is securely tightened after refueling.

Operating

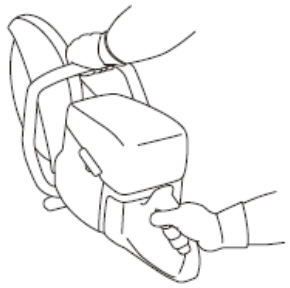
⚠WARNING

- The use of products such as cutters, grinders, drill s, that sand or form material can generate dust and vapors which may contain hazardous chemicals. Check the nature of the material you intend to process and use an appropriate breathing mask.
- Long-term exposure to noise can result in permanent hearing impairment.
- Always use approved hearing protection. Listen for warning signals or shouts when you are wearing hearing protection. Always remove your hearing protection as soon as the engine stops.
- CAUTION! Sparks may appear and start afire when you work with the machine. Always keep fire fighting equipment handy.
- The machine can be a dangerous tool if used incorrectly or carelessly, which can cause serious or fatal injury to the operator or others.
- Never allow children or other persons not trained in the use of the machine to use or service it.
- Never allow anyone else to use the machine without first ensuring that they have read and understood the contents of the operator's manual.
- Never use the machine if you are fatigued , while under the influence of alcohol or drugs, medication or anything that could affect your vision, alertness, coordination or judgment.
- The safety distance for the power cutter is 50ft. You are responsible to ensure that animals and onlookers are not within the working area. Do not start culling until the working area is clear and you are standing firmly.
- Do not pull the power cutter to one side, this can cause the blade to jam or break resulting in injury to people.
- Never use a diamond blade to cut plastic material. The heat produced during cutting may melt the plastic and it can slick to the cutting blade and cause a kickback.
- Cutting metal generates sparks that may cause fire. Do not use the machine near ignitable substances or gases.

NEVER CUT ASBESTOS MATERIALS!

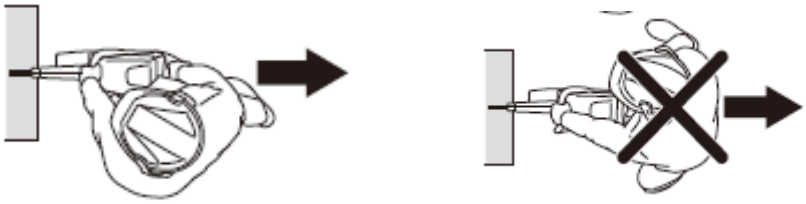
Work & Safe

- Hold the saw with both hands; keep a firm grip with thumbs and fingers encircling the handles. The right hand should be on the rear handle and the left hand on the front handle. All operators , weather right or left handed shall use this grip. Never operate a power cutter holding it with only one hand

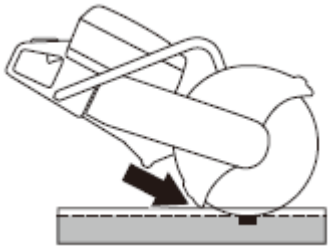


- Stand parallel to the cutting blade. Avoid standing straight behind. In the event of a kickback the

saw will move in the plane of the cutting blade



- Maintain a safe distance from the cutting blade when the engine is running
- Never leave the machine unsupervised with the motor running
- Never move the machine when the cutting equipment is rotating. Make sure that the blade has come to a complete stop before the machine is put on the ground. The machine is equipped with a friction retarder to shorten the blade stop time
- The guard for the cutting equipment should be adjusted so that the rear section is flush with the work piece. Spatter and sparks from the material being cut are then collected up by the guard and led away from the user. The guards for the cutting equipment must always be fitted when the machine is running.

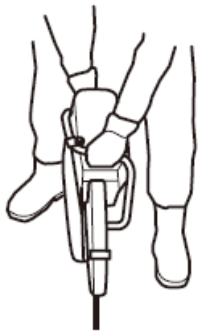


- Never use the kickback zone of the blade for cutting See instructions under the heading "Kickback"
- Keep a good balance and a firm foothold
- Never cut above shoulder height
- Never cut from a ladder. Use a platform or scaffold if the cut is above shoulder height. Do not overreach

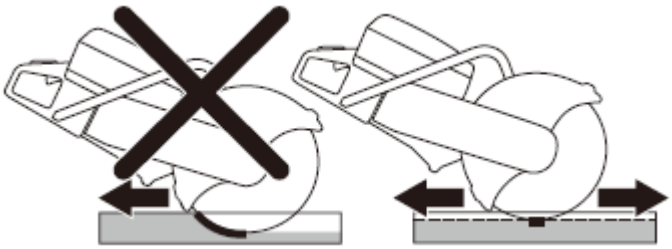


- Stand at a comfortable distance from the work piece Check that the blade is not in contact with anything when the machine is started
- Apply the cutting blade gently with high rotating speed (full throttle) Maintain full speed until cutting is complete
- Let the machine work without forcing or pressing the blade

- Feed down the machine in line with the blade Pressure from the side can damage the blade and 1s very dangerous



- Move the blade slowly forwards and backwards to achieve a small contact area between the blade and the material to be cut. This reduces the temperature of the blade and ensures effective cutting



Managing dust

- The machine is fitted with a low flushing water kit that offers maximum dust suppression
- Use wet cutting blades with water cooling when possible for optimal dust management. See instructions in the section "Cutting blades".
- Adjust the water flow using the valve to bind the cutting dust. The volume of water required varies depending on the type of job at hand
- If water hoses loosen from their supply sources, this indicates that the machine is connected to a water pressure that is too high. See instructions under the "Technical data" heading for recommended water pressure

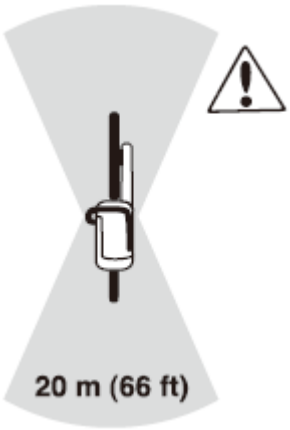
Cutting with toothed/carbide tipped blades during rescue operations

Training and protective equipment

- Only operators trained in the use of cutting with a power cutter equipped with carbide tipped blade shall be allowed to operate the power cutter
- Full protective firefighting gear shall be worn by the operator at all times
- A full face shield (not just protective eye glasses) shall be worn by the operator to protect the face from flying debris or a sudden kick-back of the power cutter

Risk area

No persons that do not have the protective equipment described above shall be allowed inside the risk area for thrown material

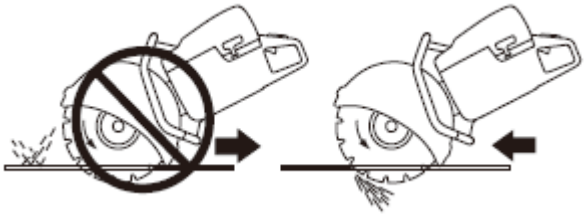


Blade speed

Apply the cutting blade gently with high rotating speed (full throttle) Maintain full speed until cutting is complete Low blade speed, especially in hard and thin materials can result in jamming and the breaking-off of the carbide tips

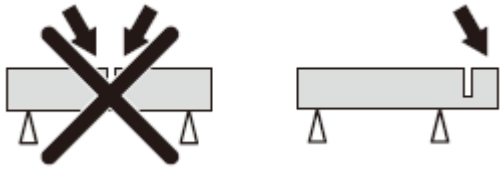
Thin material

Cutting thin and hard material (i.e. a sheet metal covered roof) should be conducted in a forward direction for best control



Pinching or jamming

Make a careful evaluation of how the object will move during the final stage of the cutting to avoid pinching or jamming. The cut must open during the cut. If the object sags and the cut begins to close the blade may pinch , possibly resulting in a kick-back or damage to the blade



Cutting in line

Skewing or twisting in the line of cut will reduce cutting efficiency and damage the blade



Before each rescue operation

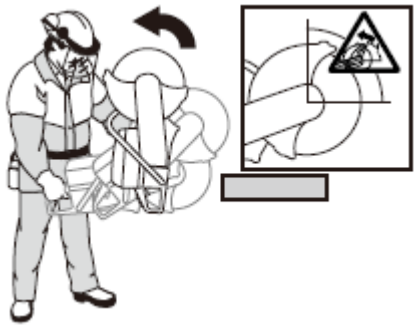
Check that the blade and the blade guard are not damaged or cracked. Replace the blade or the blade guard if it has been exposed to impact or is cracked

- Check that no carbide tips have loosened from the cutting blade
- Check that the blade is not skew or shows signs of cracking or other defects

When cutting in hard materials carbide tipped blades will rapidly lose its sharpness. For best performance during rescue operations we recommend that a new blade be installed

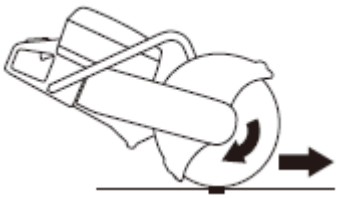
Kickback

Kickback is the sudden upward motion that can occur if the blade is pinched or stalled in the kickback zone. Most kickbacks are small and pose little danger. However a kickback can also be very violent and throw the power cutter up and back towards the user in a rotating motion causing serious or even fatal injury



Reactive force

A reactive force is always present when cutting. The force pulls the machine in the opposite direction to the blade rotation. Most of the time this force is insignificant. If the blade is pinched or stalled the reactive force will be strong and you might not be able to control the power cutter



Never move the machine when the cutting equipment is rotating. Gyroscopic forces can obstruct the intended movement

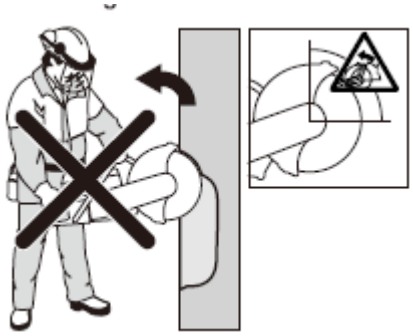
Kickback zone

Never use the kickback zone of the blade for cutting. If the blade is pinched or stalled in the kickback zone, the reactive force will push the power cutter up and back towards the user in a rotating motion causing serious or even fatal injury.



Climbing kickback

If the kickback zone is used for cutting the reactive force drives the blade to climb up in the cut. Do not use the kickback zone. Use the lower quadrant of the blade to avoid climbing kickback



Pinching kickback

Pinching is when the cut closes and pinches the blade. If the blade is pinched or stalled the reactive force will be strong and you might not be able to control the power cutter.

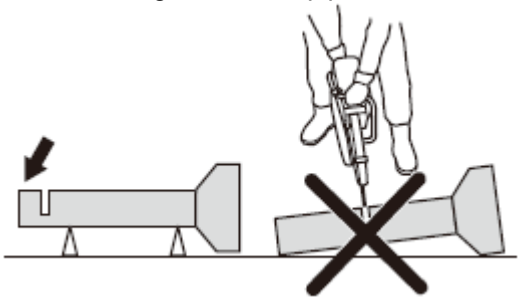


If the blade is pinched or stalled in the kickback zone, the reactive force will push the power cutter up and back towards the use in a rotating motion causing serious or even fatal injury. Be alert for potential movement of the Work piece. If the work piece is not properly supported and shifts as you cut, it might pinch the blade and cause a kick back

Pipe cutting

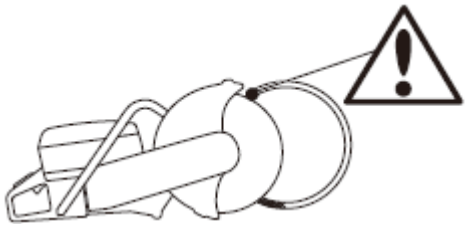
Special care should be taken when cutting in pipes. If the pipe is not properly supported and the cut kept open throughout the cutting, the blade might be pinched in the kickback zone and cause a severe kickback. Be especially ale it when cutting a pipe with a belled end or a pipe in a trench that, if not properly supported, may sag and pinch the blade

Before starting the cut the pipe must be secure so it does not move or roll during cutting.



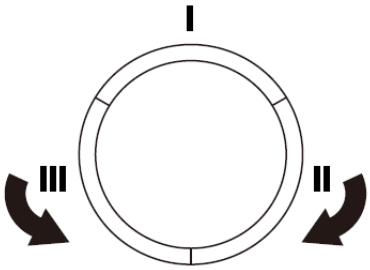
If the pipe is allowed to sag and close the cut, the blade will be pinched in the kick back zone and a severe kick back might develop. If the pipe is properly supported the end of the pipe will move

downward, the cut will open and no pinching will occur



Proper sequence cutting a pipe

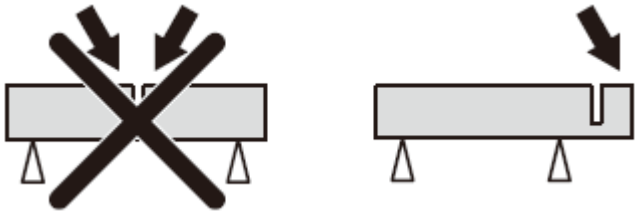
1. First cut section I
2. Move to side II and cut from section I to bottom of the pipe
3. Move to side III and cut the remaining part of the pipe ending at the bottom



How to avoid kickback

Avoiding kickback is simple

- The work piece must always be supported so that the cut stays open when cutting through. When the cut opens there is no kickback. If the cut closes and pinches the blade there is always a risk of kickback



- Take care when inserting the blade in an existing cut
- 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

Starting and Stopping

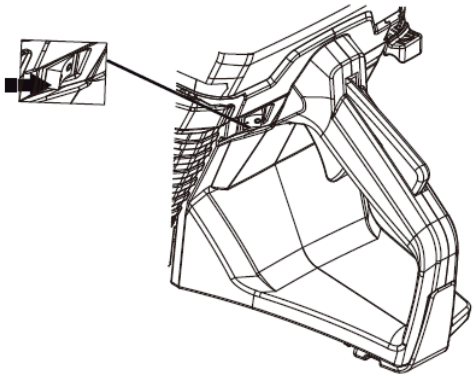
⚠WARNING

- Note the following before starting: Please read the operator's manual carefully and make sure you understand the instructions before using the machine.
- Wear personal protective equipment. See under heading "Personal protective equipment".
- Do not start the machine without the belt and bell guard fitted. Otherwise the clutch could come loose and cause personal injuries.
- Check that the fuel cap is properly secured, and that there is no fuel leakage.
- Make sure no unauthorized persons are in the working area, otherwise there is a risk of serious personal injury.

Starting

With a cold engine:

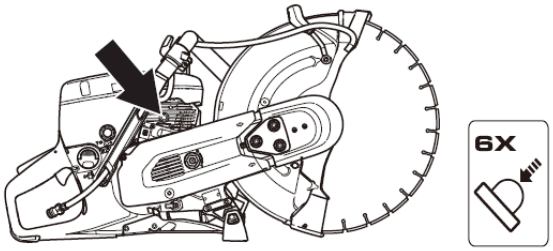
- Make sure that the stop switch (STOP) is in the left



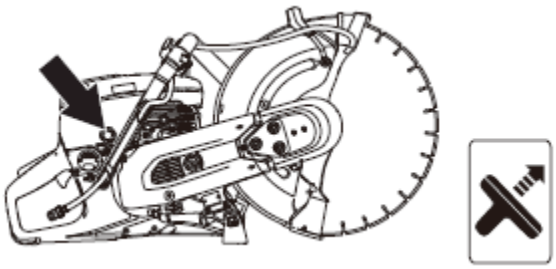
- Start throttle position and choke is obtained by pulling out the choke control completely



- Decompression valve: Press in the valve to reduce the pressure in the cylinder, this is to assist starting the power cutter. The decompression valve should always be used when starting. The valve automatically returns to its initial position when the machine starts



- Press the air purge diaphragm repeatedly until fuel begins to fill the diaphragm (about 6 times). The diaphragm need not be completely filled.



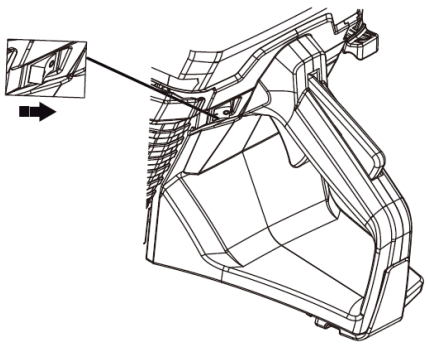
- Grip the front handle with your left hand. Put your right foot on the lower section of the rear handle pressing the machine against the ground. Pull the starter handle with your right hand until the engine starts. Never twist the starter cord around your hand.



- Push in the choke control as soon as the engine starts, with the choke pulled out the engine will stop after a few seconds. (If the engine stops anyway, pull the starter handle again.)
- Press the throttle trigger to disengage the start throttle and the machine will idle

With a warm engine

- Make sure that the stop switch (STOP) is in the left



- Set the choke control in the choke position. The choke position is also the automatic start throttle position



- Decompression valve: Press in the valve to reduce the pressure in the cylinder, this is to assist starting the power cutter. The decompression valve should always be used when starting. The valve automatically returns to its initial position when the machine starts



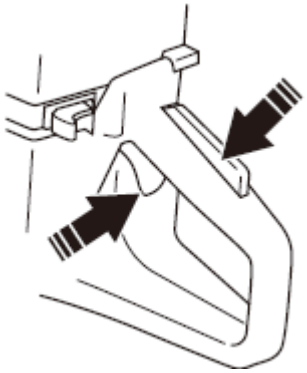
- Push the choke control to disable the choke (the start throttle position remains)



- Grip the front handle with your left hand. Put your right foot on the lower section of the rear handle pressing the machine against the ground. Pull the starter handle with your right hand until the engine starts Never twist the starter cord around your hand

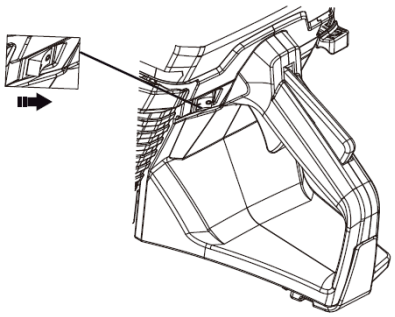


- When the machine starts, press the throttle trigger to disengage the start throttle, and the machine will idle



Stopping

- Stop the engine by moving the stop switch (STOP) to the right



Maintenance

⚠WARNING

- The user must only carry out the maintenance and service work described in this Operator's Manual. More extensive work must be carried out by an authorized service workshop.
- The engine should be switched off, and the stop switch in STOP position.
- Wear personal protective equipment. See under heading "Personal protective equipment".
- The life span of the machine can be reduced and the risk of accidents can increase if machine maintenance is not carried out correctly and if service and/or repairs are not carried out professionally. If you need further information please contact your nearest service workshop.

Maintenance schedule

Daily maintenance	Weekly maintenance	Monthly maintenance
Cleaning	Cleaning	Cleaning
External cleaning		Spark plug
Cooling air intake		Fuel tank
Functional inspection	**Functional inspection**	**Functional inspection**
General inspection	Vibration damping system*	Fuel system
Throttle lockout•	Muffler*	Air filter
Stop switch*	Drive belt	Drive gear, clutch
Blade guard*	Carburetor	
Cutting blade**	Starter housing	
Water delivery system		
Check for fuel leaks		

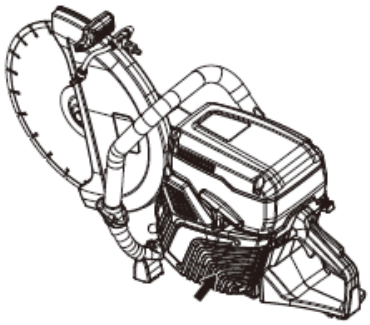
Cleaning

External cleaning

- Clean the machine daily by rinsing it with clean water after the work is finished.

Cooling air intake

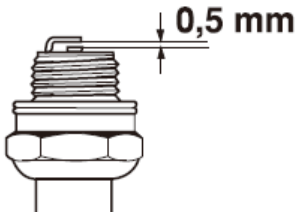
- Clean the cooling air intake when needed



Spark Plug

- If the machine is low on power, difficult to start or runs poorly at idle speed: always check the spark plug first before taking other steps

- Ensure that the spark plug cap and ignition lead are undamaged to avoid the risk of electric shock
- If the spark plug is dirty, clean it and at the same time check that the electrode gap is 0.5 mm. replace if necessary



These factors cause deposits on the spark plug electrodes, which may result in operating problems and starting difficulties.

- An incorrect fuel mixture (too much or incorrect type of oil)
- A dirty air filter

Functional inspection

General inspection

- Check that nuts and screws are tight

Drive belt

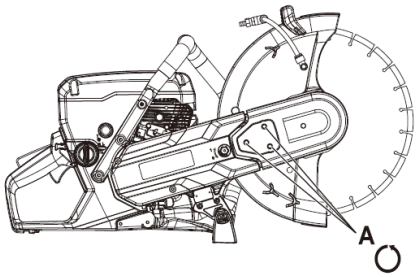
Tensioning the drive belt

The tension of a new drive belt must be read 」used after one or two tanks of fuel have been used

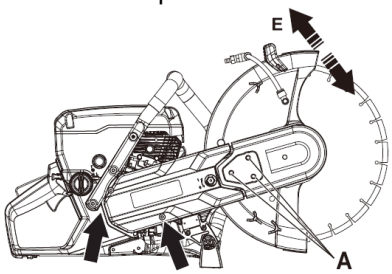
When the machine is equipped with a friction retarder, a scraping sound can be heard from the bearing housing when the blade is turned by hand. This is quite normal Please contact the workshop if you have any questions

The drive belt is enclosed and well protected from dust and dirt

- Loosen the three bolts (A) one turn anticlockwise

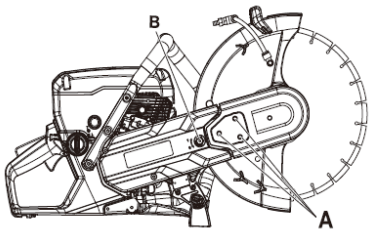


- Wiggle the blade guard (E) up and down 3-5 times, and then tighten the nuts (A) with the combination spanner.

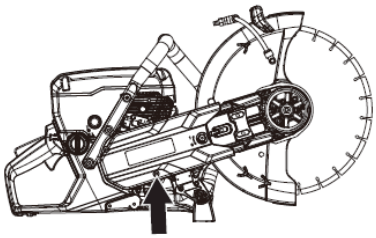


Replacing the drive belt

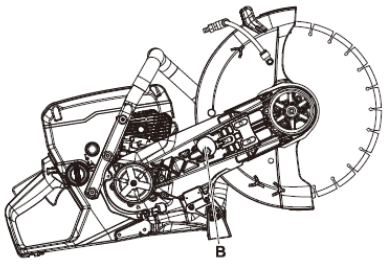
- Loosen the three nuts (A) holding the upper belt guard. Turn the belt tensioner (B) to position "O" to release the tension



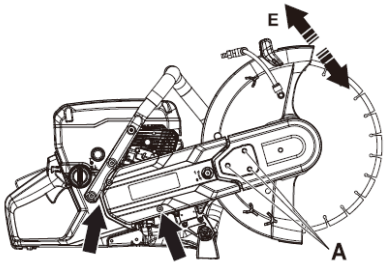
- Remove the upper belt guard.
- Now remove the rear belt guard



- Replace the drive belt. Turn the belt tensioner (B) to position "1" to tighten the drive belt.



- Fit the belt guards and tighten the nuts (A) finger tights. Wiggle the blade guard (E) up and down 3-5 times, and then tighten the nuts (A) with the combination spanner.



Carburetor

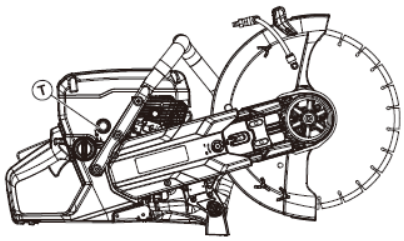
The carburetor is equipped with fixed needles to ensure the machine always receives the correct mixture of fuel and air. When the engine lacks power or accelerates poorly, do the following

- Check the air filter and replace if necessary. When this does not help, contact an authorized service workshop

Adjusting the idle speed

Start the engine and check the idling setting. When the carburetor is set correctly the cutting blade should be still while engine is idling.

- Adjust the idle speed using the T screw. When an adjustment is necessary, first turn the screw clock wise until the blade starts to rotate. Now turn the screw anti-clockwise until the blade stops rotating.

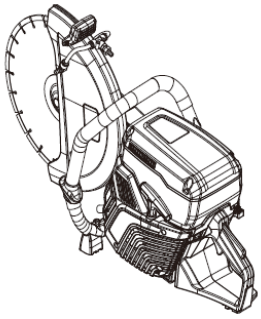


Rec.idle speed: 3000+300 rpm

Starter housing

Changing a broken or worn starter cord

- Loosen the screws that hold the starter against the crankcase and remove the starter.



Fuel system

General

- Check that the fuel cap and its seal are not damaged.
- Check the fuel hose. Replace when damaged.

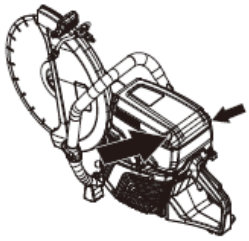
Fuel filter

- 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 located inside the tank.
- The filter cannot be cleaned but must be replaced with a new filter when it is clogged. **THE FILTER SHOULD BE CHANGED AT LEAST ONCE PER YEAR.**

Air filter

The air filter only needs to be checked if the engine drops in power.

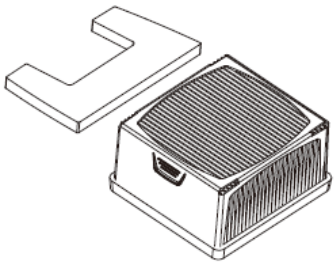
- Loosen the screws. Remove the air filter cover.



- Check the air filter and replace if necessary

Replacing the air filter

- Loosen the screws. Remove the cover.



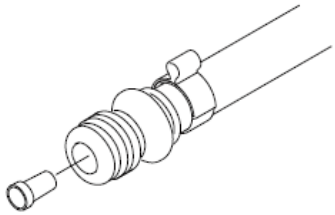
- Replace the air filter

Drive gear, clutch

- Check the clutch centre, drive gear and clutch spring for wear.

Water delivery system

Check the nozzles on the blade guard and the filter in the water connection for clogging and clean as necessary



Disposal, scrapping

This product should be submitted to an appropriate recycling station in accordance with local requirements. By ensuring that this product is taken care of correctly, you can help to counteract the potential negative impact on the environment and people that can otherwise result through the incorrect waste management of this product. For more detailed information about recycling this product, contact your municipality, your domestic waste service or the shop from where you purchased the product.

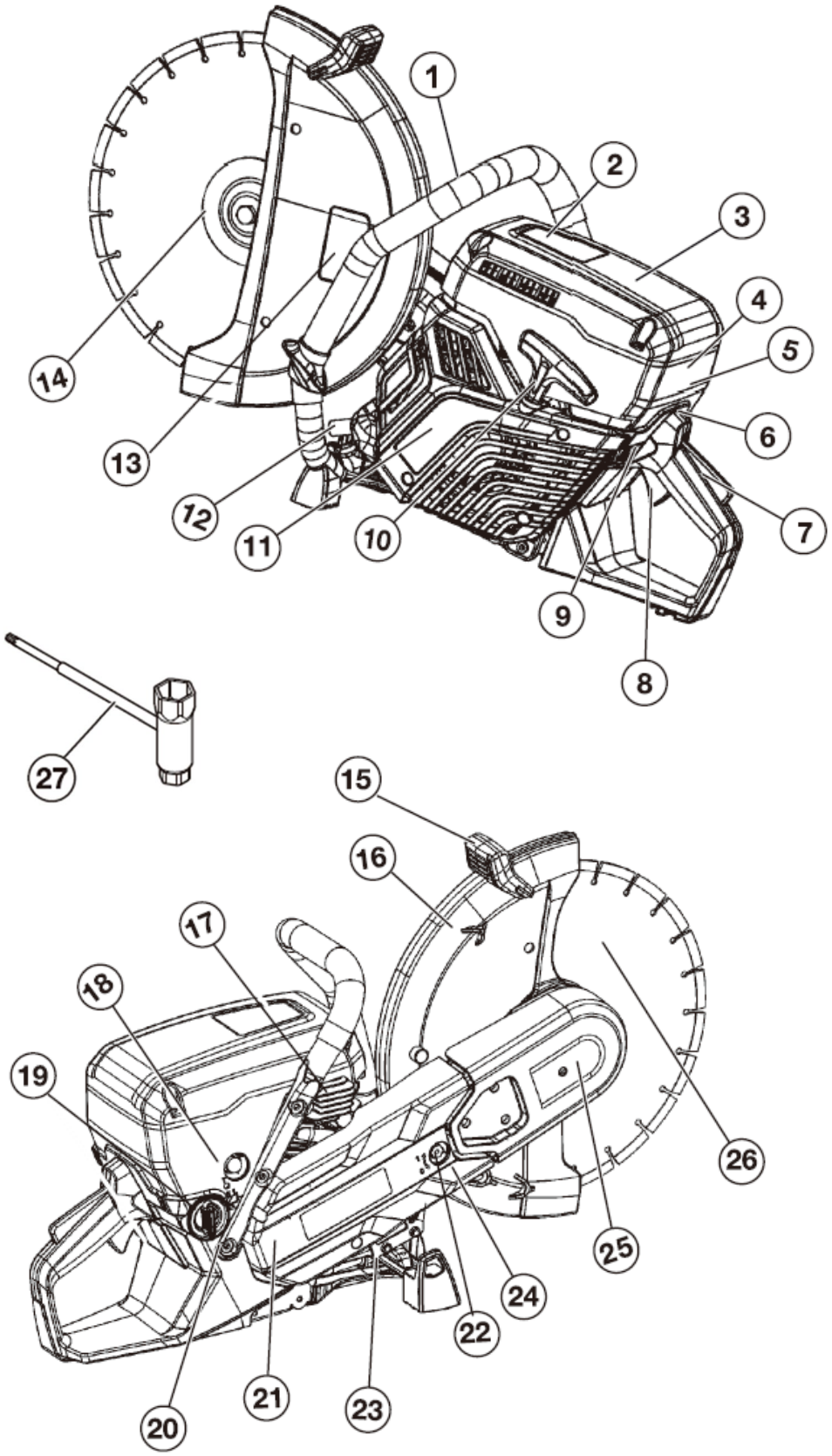
Troubleshooting

⚠WARNING

- If service operations or troubleshooting does not require the machine to be on, the engine should be switched off, and the stop switch in STOP position.

Failure	Possible Cause	Corrective Action
The machine does not start	Incorrect starting procedure	See instructions under the heading Starting and stopping
	Stop switch in the right (STOP) position	Make sure that the stop switch (STOP) is in the left position
	There is no fuel in the fuel tank	Refill with fuel
	Spark plug defective	Replace the spark plug
	Defective clutch	Contact your servicing dealer
The blade rotates at idle	Idle speed too high	Adjust the idle speed
	Defective clutch	Contact your servicing dealer
The blade does not rotate while throttling up	Belt too loose or defective	Tighten the belt / Replace the belt with a new one
	Defective clutch	Contact your servicing dealer
	Blade fitted incorrectly	Make sure the blade is properly installed
The machine has no power while attempting to throttle up	Clogged air filter	Check the air filter and replace if necessary
	Clogged fuel filter	Replace the fuel filter
	Fuel tank vent blocked	Contact your servicing dealer
Vibration levels are too high	Blade fitted incorrectly	Check that the cutting blade is fitted correctly and does not show signs of damage. See the instructions in the sections "Cutting blades" and "Assembly and adjustments".
	Blade defective	Change the blade and make sure it is intact
	Vibration damping elements defective	Contact your servicing dealer
Temperature of the machine is too high	A ‖ intake or cooling flanges blocked	Clean the machine's air intake/cooling flanges
	Belt slipping	Check belt / adjust the tension
	Clutch slipping / is defective	Always cut at full throttle

Parts Diagram



Parts List

Reference	Part Number	Part Description	Quantity
1	1	Front handle	1
2	2	Warning decal	1
3	3	Air filter cover	1
4	4	Starting instruction decal	1
5	5	Cylinder cover	1
6	6	Choke control with start throttle lock	1
7	7	Throttle trigger lockout	1
8	8	Throttle trigger	1
9	9	Stop switch	1
10	10	Starter handle	1
11	11	Starter housing	1
12	12	Muffler	1
13	13	Cutting equipment decal	1
14	14	Flange, spindle, bushing (see instructions in the section "Assembling and adjustments")	1
15	15	Adjustment handle for guard	1
16	16	Blade guard	1
17	17	Decompression valve	1
18	18	Air purge	1
19	19	Fuel cap	1
20	20	Water connection with filter	1
21	21	Belt guard	1
22	22	Belt tensioner	1
23	23	Rating plate	1
24	24	Cutting arm	1
25	25	Cutting head	1
26	26	Cutting blade (not supplied)	1
27	27	Combination spanner	1

Replacement Parts

- For replacement parts and technical questions, please call Customer Service at **1-800-222-5381**.
- Not all product components are available for replacement. The illustrations provided are a convenient reference to the location and position of parts in the assembly sequence.
- When ordering parts, the following information will be required: item description, item model number, item serial number/item lot date code, and the replacement part reference number.
- The distributor reserves the rights to make design changes and improvements to product lines and manuals without notice.

Limited Warranty

Northern Tool and Equipment Company, Inc. ("We" or "Us") warrants to the original purchaser only ("You" or "Your") that the Klutch product purchased will be free from material defects in both materials and workmanship, normal wear and tear excepted, for a period of **one year** from date of purchase. The foregoing warranty is valid only if the installation and use of the product is strictly in accordance with product instructions. There are no other warranties, express or implied, including the warranty of merchantability or fitness for a particular purpose. If the product does not comply with this limited warranty, Your sole and exclusive remedy is that We will, at our sole option and within a commercially reasonable time, either replace the product or product component without charge to You or refund the purchase price (less shipping). This limited warranty is not transferable.

Limitations on the Warranty

This limited warranty does not cover: (a) normal wear and tear; (b) damage through abuse, neglect, misuse, or as a result of any accident or in any other manner; (c) damage from misapplication, overloading, or improper installation; (d) improper maintenance and repair; and (e) product alteration in any manner by anyone other than Us, with the sole exception of alterations made pursuant to product instructions and in a workmanlike manner.

Obligations of Purchaser

You must retain Your product purchase receipt to verify date of purchase and that You are the original purchaser. To make a warranty claim, contact Us at 1-800-222-5381, identify the product by make and model number, and follow the claim instructions that will be provided. The product and the purchase receipt must be provided to Us in order to process Your warranty claim. Any returned product that is replaced or refunded by Us becomes our property. You will be responsible for return shipping costs or costs related to Your return visit to a retail store.

Remedy Limits

Product replacement or a refund of the purchase price is Your sole remedy under this limited warranty or any other warranty related to the product. We shall not be liable for: service or labor charges or damage to Your property incurred in removing or replacing the product; any damages, including, without limitation, damages to tangible personal property or personal injury, related to Your improper use, installation, or maintenance of the product or product component; or any indirect, incidental or consequential damages of any kind for any reason.

Assumption of Risk

You acknowledge and agree that any use of the product for any purpose other than the specified use(s) stated in the product instructions is at Your own risk.

Governing Law

This limited warranty gives You specific legal rights, and You also may have other rights which vary from state to state. Some states do not allow limitations or exclusions on implied warranties or incidental or consequential damages, so the above limitations may not apply to You. This limited warranty is governed by the laws of the State of Minnesota, without regard to rules pertaining to conflicts of law. The state courts located in Dakota County, Minnesota shall have exclusive jurisdiction for any disputes relating to this warranty.

KLUTCH

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Burnsville, Minnesota 55306
www.northerntool.com

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