

OWNERS MANUAL



Joint Clean Out and Concrete Saw
MODEL:
GC25E UP

FORM << GC25E UP rev 8/2013



WARRANTY

Norton warrants all products manufactured by it against defects in workmanship or materials for a period of one (1) year from the date of shipment to the customer.

The responsibility of Norton under this warranty is limited to replacement or repair of defective parts at Norton's Stephenville, Texas factory, or at a point designated by it, of such part as shall appear to us upon inspection at such point, to have been defective in material or workmanship, with expense for transportation borne by the customer.

In no event shall Norton be liable for consequential or incidental damages arising out of the failure of any product to operate properly.

Integral units such as **gasoline engines, electric motors, batteries, tires, transmissions, etc.**, are excluded from this warranty and are subject to the prime manufacturer's warranty.

This warranty is in lieu of all other warranties, expressed or implied, and all such other warranties are hereby disclaimed.

Important: Before placing equipment in operation, record the following information.

MODEL: _____ **SERIAL NO.** _____

PURCHASE FROM: _____

ADDRESS: _____

CITY _____ **STATE** _____ **ZIP** _____

TELEPHONE NO. _____

Before using this equipment, make sure that person using it read and understand the instructions in this owner's manual.

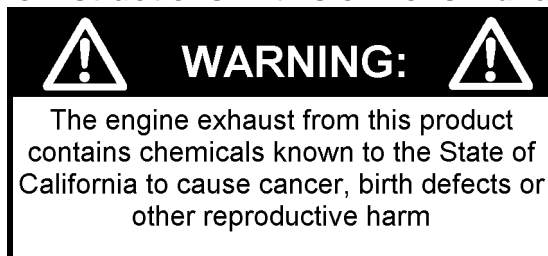


Table of Contents

CONTENTS	PAGE
I. Preparation	
A. Safety Precautions	4-6
B. Assembly	7
C. GC25E UP Joint Clean Out and Concrete Saw Specifications	8-9
D. Pointer Alignment	10
D. Electrical Connections GC25E UP	11-14
Power Connections	11
Generators	12
Wiring Diagram GC25E UP	12
Thermal Reset	12
Electrical Trouble Shooting	13-14
II. Operation	
A. Installing The Blade	15-18
C. Operating The Saw	16-20
D. Cutting Technique	20
E. Green Concrete Cutting	20-21
III. Maintenance	
A.	22
B. Bearings	22-23
C. V-Belts	23
D. Depth Control	23
E. Dust Removal System Adjustment	24-33
IV. Parts List Section	
A. Ordering Information	24
B. Parts Drawing / Service Parts List	25-34
Blade Guard Assembly GC25E UP	25
Cutting Head Assembly GC25E UP	26
Blade Shaft Assembly GC25E UP	27
Depth Control Assembly GC55 and GC25E UP	28
Motor Assembly GC25E UP	29
Frame Assembly GC25E UP	30
Front Pointer Assembly GC25E UP	31
Main Assembly GC25E UP	32-34



Read Owners Manual Before Use



Safety Alert Symbol: Information Following This Symbol Is Very Important.

Use Only Norton Diamond Blades

I. PREPARATION

A. Safety Precautions

Important! The following safety precautions must always be observed.

Hazard Symbols



Motor components can get extremely hot from operation. To prevent burns, do not touch the engine or related parts while the engine is running or immediately after it is turned off. Never operate the engine with any heat shields or guards removed.



Keep all guards in place when operating any piece of equipment



Keep hands, feet, hair, and clothing away from all rotating parts



Never tamper with the governor components of settings to increase the maximum speed. Severe personal injury and damage to the engine or equipment can result if operated at speed above maximum. Always obey the maximum speed rating of blade.



DO NOT LIFT THE SAW BY THE HANDLE BARS

WARNING

Dust and Silica Warning

Grinding/cutting/drilling of masonry, concrete, metal and other materials can generate dust, mists and fumes containing chemicals known to cause serious or fatal injury or illness, such as respiratory disease, cancer, birth defects or other reproductive harm. If you are unfamiliar with the risks associated with the particular process and/or material being cut or the composition of the tool being used, review the material safety data sheet and/or consult your employer, the material manufacturer/supplier, governmental agencies such as OSHA and NIOSH and other sources on hazardous materials and make certain to comply with all product warnings and instructions for the safe and effective use of the material being cut. California and some other authorities, for instance, have published lists of substances known to cause cancer, reproductive toxicity, or other harmful effects.

Control dust, mist and fumes at the source where possible. In this regard use good work practices and follow the recommendations of the manufacturer/supplier, OSHA/NIOSH, and occupational and trade associations. Water should be used for dust suppression when wet cutting is feasible. When the hazards from inhalation of dust, mists and fumes cannot be eliminated through engineering controls such as vacuum and/or water mist, the operator and any bystanders should always wear a respirator approved by NIOSH/MSHA for the material being cut.

Use Approved:



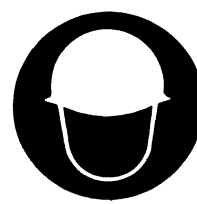
Eye Protection



Hearing Protection



Respiratory Protection



Head Protection

1. Before mounting any blade on the saw, the blade should be inspected for any damage which might have occurred during shipment, handling or previous use.
2. The blade collars and arbors should be cleaned and examined for damage before mounting the blade.
3. The blade must be properly fitted over the arbor with the drive pin on the outside collar projecting through the drive pin hole on the blade and inside collar.
4. The blade shaft nut, which is a left-hand thread nut, must be tightened securely against the outside blade shaft collar.
5. The blade must be operated within the specified maximum operating speed listed on the blade.
6. The blade guard must be in place with the nose guard down and locked when the saw is running.
7. The operator should wear safety glasses and any other appropriate safety equipment.
8. When starting the saw, the operator should stand away and to the side of the blade.
9. If for any reason the saw should stall in the cut, raise the blade out of the cut. Check the outside blade shaft collar and nut for tightness. Inspect the blade for damage before restarting the saw. Use caution when resuming a cut. Be certain that the blade is in alignment with the previous cut.
10. During cutting operations, do not exert excess side pressure on the handles as a method of steering. Do not force the blade into the cut by lowering the blade too fast or by pushing the saw too fast.



You Are Responsible For Your Safety!!!

I. PREPARATION

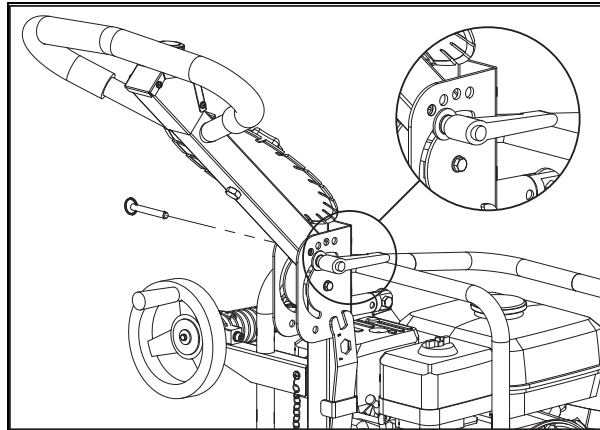
B. Assembly

The GC25E UP compact Joint Clean Out and Concrete saws are shipped completely assembled and ready for use except for diamond blade, Handle Bar position, electrical extension cord (not supplied), and power supply. Inspect the saw for shipping damage. If any damage is found, contact the shipper immediately and file a freight claim. Saint-Gobain Abrasives, Inc. is not responsible for any freight-related damages.

Adjust the Handle Bars Position:

1. Remove the GC25E UP from the box.
2. Remove the Quick Release Pin P/N: 241055 out of its retaining hole
3. Loosen the Black Knob P/N: 241054.
4. Rotate the Handle Bar from the lowered storage position to the desired position.
5. Align the hole in the Handle Bar with the holes in the frame.
6. Attach the Quick Release Pin P/N: 241055 by pushing it through the hole in the Frame and then the hole in the Handle Bar. Make sure that the Quick Release Pin passes all the way through both sides of the Frame.
7. Tighten the Black Knob P/N: 241054.

Read and understand the remaining sections of this Owner's Manual. NOTE: Do not install the blade until it is time to use the saw. ANSI regulations prohibit the transportation of any concrete saw with the blade installed.



Part #	Description	QTY
241054	SCR 5/16-18 UNC X 2-1/2" CARRIAGE BOLT	1
241055	PIN QUICKRELEASE 5/16" X 2" GRIP LENGTH	1
241054	KNOB M8 X 1.25 ADJUSTABLE	1
232110	WASHER M8 DIN125 FLAT	1
241055	WASHER 3/8 WAVE	1

C. GC25E UP Series Joint Clean Out and Concrete Saw Specifications

Dimensions/Weight	GC25E UP
Length (Working)	42-23/32" (1,090mm)
Length (Transport)	32: (813mm)
Width	18-1/8" (460mm)
Height	42-23/32" (1,090mm)
Frame Width	18-1/8" (460mm)
Pointer Length	8-7/32"(209mm)
Blade To Wall	7-1/2" (190mm)
Wheel Base Length	19" (483mm)
Blade Shaft Maximum Height	9-41/64" (245mm)
Weight Created	155 lbs (71 kg)
Weight Uncreated	135 lbs (61 kg)
Power Source	
Engine/Motor Mfg.	Gangfon Motor
Spec No.	Totally Enclosed Air Cooled Thermal Protection
Power Source	Electric
Maximum Horse Power ¹	3 HP
Net Horse Power	3 HP
Max Torque	-NA-
Power Source RPM	3450 RPM
Model	Dual Voltage
Cooling System	Forced Air
Voltage	115-230 volts
Cycles/Current/Phase	60Hz/AC/1
Full Load Amps (115/230 volts)	15/7.5 Amps
Starting Amps (115/230 volts) ²	45/22.5 Amps
Starter	Capacitor
Characteristics	
Max Blade	Ø10" (254mm)
Depth of Cut 10" (254 mm)	3.5" (88mm)
8" (203 mm)	2.5" (63mm)
Arbor Bore	5/8"
Blade Shaft Flange Diameter	3-5/64" (78mm)
Blade Shaft Speed	2905 rpm
Depth Control	Hand Wheel With Screw Feed
Blade Rotation	Counter Clock Wise (Up Cut)
Depth Lock	Standard
Depth Gauge	Standard
Number Of V-Belts	1
Blade Guard Type	Screwed On, All Steel Construction
Cutting Side	Center
Lifting Bale	Built In
Handle Bars	Adjustable, Stays Level At All Times
Wheels	Non-marking
Wheel Size Front and Rear	3-3/8"x2-3/4"x25/32" (85x70x20mm)
Vacuum Port Size	2" OD

1) Net Horsepower Rating provided by engine the manufacturer measured in accordance to SAE j1349 @ 3,600 RPM. The engine may vary from this value. Actual horsepower on the machine will vary due to operating speed of engine, belt tension, environmental conditions, machine maintenance, and other variables.

2) Starting Amps are instantaneous – for best results use with a 30Amp circuit.

The GC25E UP Joint Clean Out and Concrete Saw was designed from the ground up to be a High Performance Multiple Application saw. The GC25E UP is the best electric Joint Clean Out saw on the market and is capable of cutting Cured Concrete and Asphalt.

Used For Cutting Multiple Applications:

Joint Clean Out
Joint Widening
Cured Concrete
Asphalt

Features that make the GC25E UP a High Performance Joint Clean Out and Concrete Saw:

- Blade in center line of saw makes it easier to push and the machine tracks straighter. The center line blade also helps the GC25E UP to roll straight while cutting due to the blade being parallel to the blade.
- Reinforced all steel frame reduces bending, flexing, and vibrations which can damaged the concrete. The reinforced all steel frame is also stronger than the competitive models
- Soft Silicone Rubber wheels that are based off of a Norton Patient to absorb vibrations that can create machine movement. The wheels also feature a concave profile that helps the machine to roll over small objects with out upsetting the blade.
- 10" maximum blade capacity with standard 5/8" arbor. The GC25E UP can be used with 7" to 10" diameter Norton blades.
- Hand Wheel with Depth Adjustment Screw & Depth allows precise depth adjustments up to 3-1/2" deep when used with a 10" blade.
- Fully adjustable dust removal Shroud system with standard vacuum hose attachment helps to keep dust down.
- Up cut helps with the extraction of dust when joint cleaning.
- Front and rear pointers for precise alignment.
- Handle Bar and Pointer folds up for compact easy transport.
- Light in weight.
- Dual voltage motor, change voltages from 115v to 230v by flipping a switch.
- The GC25E UP is an extremely simple machine to operate.
- The GC25E UP is designed for Joint Clean Out, Joint Widening, and cutting multiple applications: such as Cured Concrete and Asphalt.
- Includes a free 8" Joint Clean Out Blade.

D. Pointer Alignment

1. Use a straight edge, and carefully mark a line 12 feet long on a smooth level surface.
2. Place the saw blade on the marked line, move the saw to the center of the marked line and then lower the blade until it is about 1/16" above the marked line.
3. Measure from each end of the saw frame to insure that the frame is parallel to the marked line. Adjust the saw as needed.
4. With the blade centered on the marked line and the saw frame parallel to the marked line, lower the front pointer.
5. Adjust the nylon nuts until the pointer is aligned with the marked line.

E. Electrical Connections GC25E UP



Important-Before connecting the motor leads to the power supply be sure that the voltage, cycles and phase shown on the nameplate of the motor correspond to the available power supply. The GC25E UP is equipped with a dual voltage motor which runs on 115v or 230v 60Hz Single Phase Voltage. Either a 115-volt or 230 volt power supply can be used. To change voltage simply move the voltage change switch located on the rear of the motor to the required voltage, no rewiring is required. Wherever possible, use 230-volt power supply for best operation.



GC25E UP Voltage Change Switch (Shown in the 230v Position)



Failure to run the motor on the proper voltage will damage the motor and is not covered under warranty. Improperly wired motors are not covered under warranty.

The GC25E UP models are set for 115 Volt from the factory!!!

Power Connections

Connect the power supply to the pigtail leads of the switch. Direct wiring connection is preferred, but an extension cord with an electrical plug with 30-amp capacity will give the best performance. A 30-amp circuit breaker is recommended. Connecting wires should be as short as possible and in one piece. For best performance use the GC25E UP on a circuit with a 30A circuit breaker. If a 30A circuit is not available the use a 20A. The GC25E UP will require up to 18A when under full load. In no case should the connecting wires be longer than shown in the following table for use with the GC25E UP Single-phase motors:

Wire Gauge	Length Of Wire	
	115 Volt	230 Volt
Number 12	25 ft (7.6 m)	100 ft (30.5 m)
Number 10	50 ft (15.2 m)	150 ft (45.7 m)
Number 08	75 ft (22.9 m)	175 ft (53.3 m)

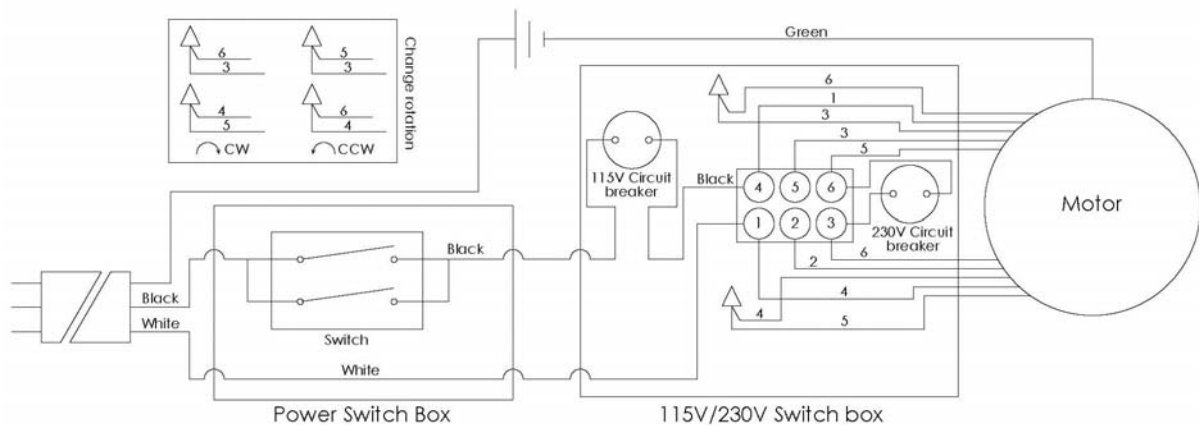
Caution-When wires that are too small gauge or too long are used, loss of power, over heating, or possible damage to the motor will result. Damage or failure of motors due to incorrect power supply cord lengths are not covered under any warranty.



Always use the proper wiring connectors that are UL/CSA approved to attach the motor to the electrical supply. Any wiring hook ups should be made by qualified personal and made to National Electrical Code and to any Local Codes.

Generators:

If a generator must be used, it must be of 8kW or larger. The generator must have a 30A circuit and capable of providing a minimum of 8kW at the required voltage. Under size generators will cause motor damage and is not covered under warranty.



Wiring Diagram GC2E UP

Thermal Reset:

If the thermal reset engages this is a sign that the motor is over heating. Continued over heating will damage the motor. The thermal reset will reset itself once the motor is cooled. Do not force the thermal reset as it will damage the reset and motor. The causes of the thermal reset activating are:

1. Too Long or Too Thin of Extension Cord (Low Voltage). Use the correct length and gauge of Extension Cord.
2. Low Voltage Power Supply. Use a power supply with the correct voltage.
3. Incorrect Blade of Application. Contact Norton Clipper's customer service or your local sales person for the correct blade specification for your cutting application.
4. Overloading Machine. At a shallower depth. Make multiple passes (Step Cutting) at no more than 1-1/2" deep. Cut at a slower forward speed.



Damage or failure of a motor due to continued over heating as the result of incorrect extension cord length/size, incorrect power supply, incorrect application, and continued overloading is not covered under warranty.

Electrical Trouble Shooting:

The following solutions depend largely on the **total load on the circuit** and **operator technique**.

The following tips apply to all electrical motors and electrical powered products regardless of application or manufacturer: 99.99% of machine issues are application related, that is using the incorrect power supply, extension cords, operator technique, or using the incorrect blade for the material being cut.

1. Verify the circuit breaker amperage. It is recommended that the circuit breaker be at least 20A or higher for best performance. 30A will provide the best performance.
2. Verify that the blade is NOT contacting the ground when starting the unit.
 - a. The blade should be above the ground when starting the saw.
 - b. If cleaning an expansion joint make sure that the blade is NOT contacting the backer rod.
3. Extension Cord - Insure that the cord length and gauge is within the product requirements. Incorrect cord gauges and lengths kill motors! Incorrect extension cords create low voltage situations which cause the amperage to increase.
 - a. The best results will be a 50 foot or shorter 10 AWG or thicker (smaller gauge number) extension cord set which is in one piece and in good operating condition.
 - b. See section "***Power Connections:***" for addition extension cord information.
4. The voltage range for the GC25E UP saw is 108v to 125v with 115 to 120v being perfect. Lower than 108v will cause motor overheating, circuit breaker tripping, and motor failure over time.
 - a. Verify the voltage at the machine NOT the rated or assume circuit voltage.
 - b. Low voltage kills motors!!! As voltage drops amps go up as amps go up the internal temperature of the motor increases.
5. Verify the total load on the circuit. If above 15 amps move other equipment to another, separate circuit. The GC25E UP saw pulls 7 to 8 amps with NO load, as a load is applied the amp drawing will climb. Under full load (the point where the motor starts to stall, it will draw 18A or more. The issue comes from the circuit being over loaded (much greater than 15A for a long time, the exact trip value will depend on the circuit breaker, age of breaker, and how many times it has been tripped before).
 - a. If possible use a 20 amp circuit.

- b. Spread the tools over different circuits, especially the higher amperage drawing products (Vacuums and saws).
- 6. Let the GC25E UP work for you. As you push it harder the motor will draw more amperage which will over time trip the breaker. The motor with a medium working load will pull around 13A and will run with no problem.
 - a. Do not force the machine, unlike the typical hand held tools typically used for this application the GC25E UP does not need to be forced through the joint.
 - b. When cutting do not over load the machine. The machine will sound like it is working harder before the breaker trips. When the motor starts to labor let off of the feed speed.
- 7. Also check the depth of cut -- max depth should be no more than 1.75".
 - a. Always step cut. Step cutting is the best operator technique as it creates less load on the motor which means the motor will require less amperage, the speed of cutting will increase, and the blade life will increase. Step cutting saves time, saves money, increases tool life, and reduces job site problems.

II. OPERATION

A. Installing the Blade

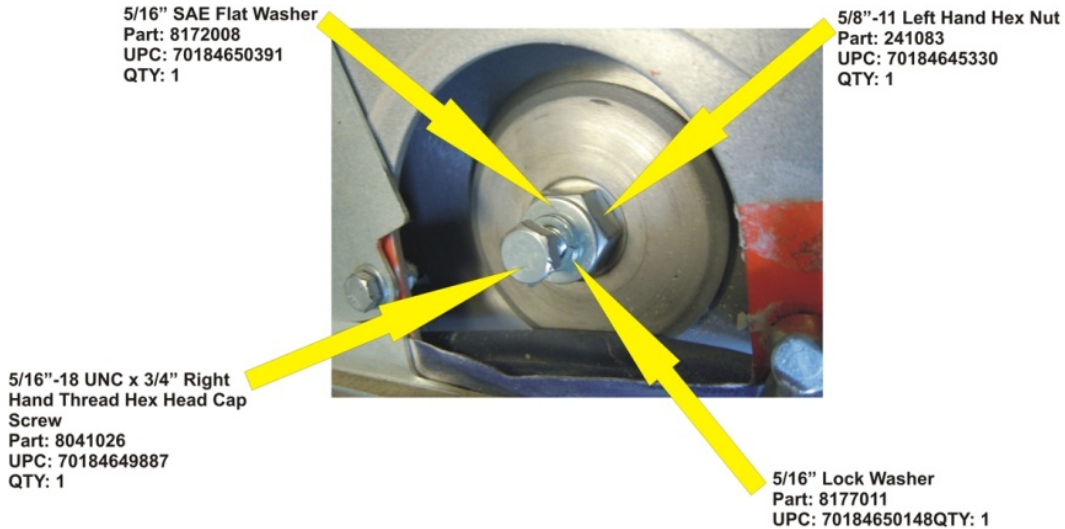
1. Verify that the GC25E UP is disconnected from the power supply and that the ON/OFF switch is in the “OFF” position.
2. Remove the 5/16”-18 UNC x 3/4” Right Hand Thread Cap Screw, 5/16 Lock Washer, 5/16 SAE Washer from the end of the blade (rotate Counter Clock Wise - CCW).
3. Remove the 5/8”-11 Left Hand Thread Hex Nut (rotate Clock Wise – CW).
4. Inspect the Blade Collars for damage.
5. Inspect the Diamond Blade for the following:
 - a. Correct Diamond Blade for the material being cut
 - b. Direction of rotation
 - c. Stress Marks or Cracks – sign of overheating the blade. Do not use if present replace the blade before use.
 - d. Heat Marks or bluing – sign of overheating the blade. Do not use if present replace the blade before use.
 - e. Verify that all blade segments are in place and are in good working condition.
6. Install the blade – NOTE Direction of rotation for the blade must be CCW (Up)
 - a. Make sure that both of the collars mating surfaces are clean and undamaged – just like any other concrete saw.



Use only Norton Diamond Blades. This machine was not designed for the use with abrasive blades.

7. Place the outer collar over the blade shaft – same as any other concrete saw – make sure the flat mating surface faces the blade.
8. Attach and tighten the 5/8”-11 Left Hand Thread Hex Nut rotate CCW.
9. Attach and tighten the 5/16”-18 UNC x 3/4” Right Hand Thread Cap Screw, 5/16 Lock Washer, 5/16 SAE Washer rotate CW.
10. Close the Blade Cover and tighten the Blade Cover Wing Nut.
11. You should be ready to go at this point.

NOTES: Never transport any concrete saw with the blade attached to the blade shaft as the blade may be damaged during shipment.



Blade Retaining System



Use Only Norton Diamond Blades

B. Operating the Saw

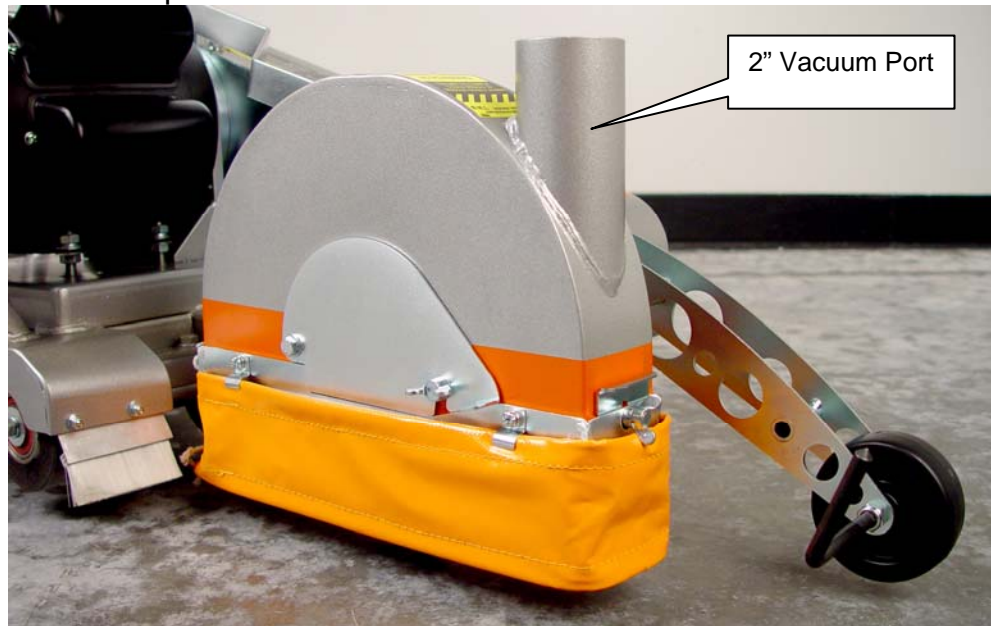
1. For blade installation instructions see section ***II. Operation sub heading A. Installing the Blade.*** Electrical Connections see section ***E. Electrical Connections GC25E UP***
2. Loose the Depth Lock Thumb Screw ½ Turn.
3. Raise the saw to the full upright position. Do not let the blade come in contact with the ground.
4. Maneuver the saw to the desired starting point.
 - a. Align the Front Pointer and Blade with the desired line of cut.
5. To start the machine: For Electrical Connections, Extension Cord Set Information, and Generator Information see section ***E. Electrical Connections GC25E UP***
 - i. Verify that the motor voltage change switch is set to the same voltage as the circuit.
 - ii. Verify that the circuit has a 30 Amp breaker installed.
 - iii. Verify that the extension cords are the correct gauge, length, and are properly grounded.

- iv. Verify that the GC25E UP power switch in the “OFF” position.
 - v. Connect the extension cord set to the machine and power supply. Follow all local and national electrical code. If unsure of how to connect the extension cord set or of the electrical circuit have a qualified Electrician make all electrical connections.
 - vi. Move the start switch to the “ON” position and the motor should start. If the motor does not start have a qualified Electrician inspect all electrical connections and the power supply.
6. To set the Depth Gauge:
- a. Slowly lower the Blade by rotating the Hand Wheel clockwise until the Blade touches the work surface.
 - b. Loosen the Depth Gauge Thumb Screw.
 - c. Move the Depth Gauge to the “0” position. NOTE: When using smaller diameter blades it may be necessary to align the Depth Gauge to the “1” mark.
 - d. Tighten the Depth Gauge Thumb Screw.
 - e. Lower the machine by slowly rotating the Raise Lower Handle clockwise until the desired depth of cut is reached.
7. Slowly lower the blade by rotating the hand wheel clockwise until the desired depth of cut is reached. Use a reasonable rate of feed. Do not force the blade into the cut!! If the engine starts to die slow down the rate of feed! If the machine tries to climb out of the cut, slow down the rate of feed.
8. Adjusting the Dust Bellows: NOTE: Normally when the Dust Bellow is set for the day there is no reason to readjust unless the blade has been removed or the cutting depth has changed.
- a. Turn the machine “OFF”.
 - b. Disconnect the Power Supply
 - c. Verify that the blade is properly installed.
 - d. Verify that the Blade Cover is closed and that the Blade Cover Thumb Screw is tightened.
 - e. Loosen the Dust Bellow front and rear Thumb Screw.
 - f. Lower the Dust Bellow until it touches the ground. NOTE: If the work surface is uneven or has debris the Bellow bottom surface can be positioned 1/8” above the work surface.
 - g. Verify that the bottom edge of the Dust Bellows is parallel to the work surface.
 - h. Tighten the front and rear Dust Bellow Thumb Screw.



GC25E UP Dust Bellows Fully Extended

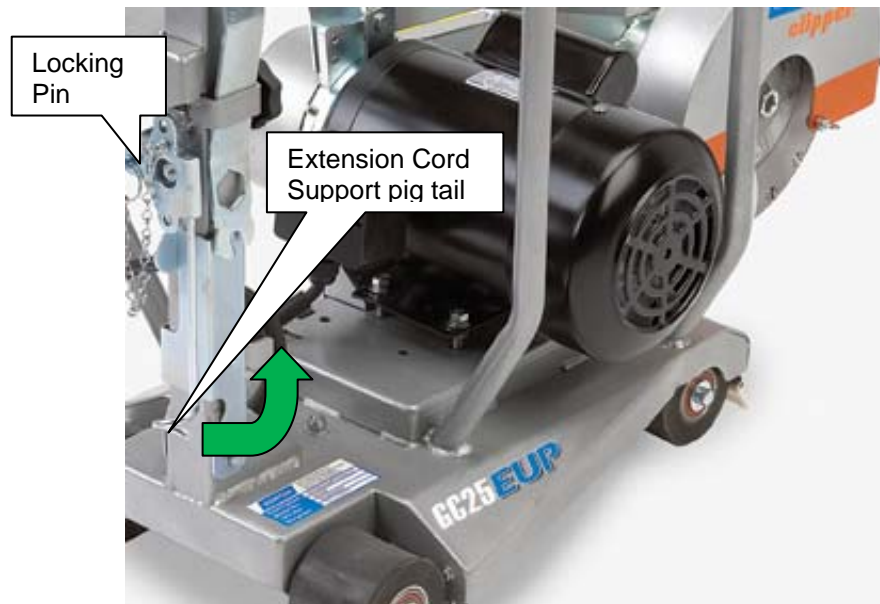
9. Vacuum Attachment:
 - a. Attach the Vacuum Hose to the Vacuum Port located on the front of the Blade Guard.
 - b. If using a Vacuum Hose that is not 2" diameter an adapter may be needed. Vacuum Adapters are available from your Vacuum supplier.
NOTE: The Vacuum Hose can be looped through the frame to help hold the hose in place.



Vacuum Port Location

10. Connect the power supply to the machine. **NOTE:** The GC25E UP is equipped with a Extension Cord Support. The Extension Cord Support will hold the Extension Cord while using the machine. To use remove the Locking

Pin and rotate the Extension Cord Support 90° counter clockwise, and reinstall the Locking Pin. Pass the Extension Cord through the pig tail located on the end of the Extension Cord Support.



Extension Cord Support

11. Turn the machine on.
12. Slowly move the machine forward
13. After cutting about 3' lower the rear pointer into the joint. The rear pointer is designed to slide into the joint path to help keep the GC25E UP in alignment with the joint to be cleaned.



Rear Pointer

14. When the end of the cut is reached, slowly raise the blade out of the cut by rotating the Hand Wheel counter-clockwise until the blade is at least one (1) inch above the ground. Only move the saw in reverse with the blade in the raised position.
15. When moving the saw to a new location, be sure the blade is not touching the ground. Always pay close attention to where you are moving and where the blade is at all times.

D. Cutting Technique

Lower the blade into the concrete to the required depth by turning the hand wheel clockwise.

Push the saw steadily forward using the front pointer as a guide. Exert enough forward pressure so that the engine begins to labor, but does not slow down. If the saw begins to stall, reduce the forward movement until full rpm is restored to the blade. If the saw stalls, raise the blade out of the cut before restarting. Avoid excessive side pressure or twisting of the blade in the cut.

When cutting for best performance do not cut at more than 1-1/2" deep per pass. Making multiple shallow passes will increase blade life, speed of cut, and decrease engine/motor loads.

Additional Guide Lines For Sawing:

- Understand and follow all of the instructions in this owner's manual.
- In critically hard aggregate, be careful not to feed too quickly as it may stall the saw or ruin the cut.
- If the saw stalls in the cut, immediately stop the forward speed and raise the blade out of the cut. If this is not done the belts can fail or the blade may be damaged.
- Go slowly with a new blade until it opens up, that is, until the diamonds can be seen and felt.

E. Joint Clean Out

The new Norton Clipper GC25E UP is specifically designed for Joint Clean Out. The machine features a Center Line cut system that allows the machine to track

straighter than competitive designs. In addition the machine features a vacuum port, and dust Bellows to help keep air bore dust down to when compared to other machines. The up cut blade rotation is utilized to help the vacuum system extract the cutting particles.

Joint Clean Out Considerations:

1. Verify the voltage and circuit Amperage. See section **E. Electrical Connections GC25E UP** for additional details. Connecting any electrical product to the incorrect power source can result in product failure covered under any warranty.
2. If using an extension cord insure that it meets the length and gauge requirements as stated in section **E. Electrical Connections GC25E UP**. Failure to use the correct size extension cord can result in circuit breaker tripping, poor performance, or motor damage which is not covered under any warranty.
3. Cut no deeper that 1-1/2" per pass for the best performance. If cutting deeper per pass the forward cutting speed will need to be reduced. Do Not cut more than 1-3/4" deep per pass. Diamond Blades will cut faster and last longer if shallower cuts are made, aka Step Cutting.
4. Let the Blade cool off. Every few minutes stop the forward movement of the machine and let the blade cool: cut for 2 to 5 minutes let the blade cool for 30 seconds. The blade will last longer and it will cut faster.
5. Verify that the blade is correct for the material being cut. Incorrect blade specifications will create more friction which will result in the electric motor drawing more amperage and may trip circuit breakers or over heat the electric motor. It is best to use diamond blades with low diamond concentration and a soft bond with ALL electrical powered saws. Use of hard bonded blades with high diamond concentrations may result in motor damaged and is not covered under any warranty.
6. When cutting concentrate on keeping the machine in the middle of the cut not on the cutting speed.
7. Do not cut into the Backer Rods. Most Backer Rods are made of steel which will result in tripping of breakers, slow cutting speeds, and or over heating of the electric motor.
8. Let the GC25E UP work for you. As you push it harder the motor will draw more amperage which will over time trip the breaker. The motor with a medium working load will pull around 13A and will run with no problem.
 - a. Do not force the machine, unlike the typical hand held tools typically used for this application the GC25E UP does not need to for forced through the joint.
 - b. When cutting do not over load the machine. The machine will sound like it is working harder before the breaker trips. When the motor starts to labor let off of the feed speed

III. MAINTENANCE

A. Electric Motor

The GC25E UP is designed with a maintenance free dual voltage totally enclosed fan cooled motor.

B. Bearings

The GC25E UP is equipped with permanently sealed blade shaft and wheel bearings that will never need any lubrication. These types of bearings are designed for long life and minimum maintenance. If any problem occurs with the blade shaft, or wheel bearings replace the bearing.

The only the Raise Screw and Cutting Head pivot point will need periodic re-lubrication. Both of these points require just a squirt of a good quality NLGI #2, aluminum complex type grease is recommended one time a month. Check the function of the Hand Wheel and Cutting Head before each use. Lubricate the Raise Screw and Cutting Head pivot point once a month or when the it becomes hard to turn the Hand Wheel.

C. V-Belts

Warning: Never make adjustments to belts or pulleys while engine is running!

1. The best tension for a belt drive is the lowest tension at which the belts will not slip under full load.
2. Simply take up the drive until the belts are snug in the grooves. Run the drive for about 15 minutes to "seat" the belts. Then impose the peak load. If the belts slip, tighten them until they no longer slip at peak load.
3. **Remember, too much tension shortens belt and bearing life!**
4. Check the belt tension frequently during the first day of operation. Check the belt tension periodically thereafter and make any necessary adjustments.
5. The two most common causes of misalignment are shown in the Figure 1 and Figure 2 to the right.
 - a). The engine drive shaft and the blade shaft are not parallel.
 - b). The pulleys are not located properly on the shafts.
6. To check alignment, all you need is a steel straight edge.

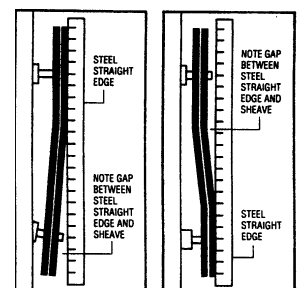


FIGURE 1 FIGURE 2

7. Line up the straight edge along the outside face of both pulleys as shown in the drawing.
8. Misalignment will show up as a gap between the pulley face and the straight edge.
9. Make sure that the width of the outside land (Area between the belt and the edge of the pulley) is equal on both pulleys.

D. Depth Control

The cutting depth is controlled by a chrome turn handle. It is located next to the push handle base, easily accessible from the rear of the saw. The handle must first be unlocked before it can be turned. It is locked by a black knob located on the operator's left side of the hand wheel near the base of the handle. This knob must be turned counter-clockwise to unlock the handle. Once unlocked rotating the handle clockwise will lower the cutting blade. Rotating it counter-clockwise will raise the cutting blade. When the proper cutting depth is achieved by reading the depth gauge, relock the turn handle to ensure a constant cutting depth throughout the cut.

The depth gauge can be found further down the shaft of the turn handle. This gauge will already be preset for an Ø10" blade, but it still must be calibrated by the user since blade diameters may vary. When using an Ø8" blade, the gauge must be readjusted from an Ø10" blade to an Ø8" blade. Simply loosen the black knob found near the collar of the gauge and slide it accordingly to achieve the proper reading.

The collar used to support the turn handle's screw should be checked after each use to make sure it is lubricated and turning freely. If more lubricant must be added, NLGI #2, aluminum complex type grease is recommended.

E. Cleaning

It is recommended to wipe all concrete dust off of the unit after each use. Once a month blow the motor and motor fan off with compressed air. Do not pressure wash the motor, switch boxes, electrical connects, bearings, belts, or bellows as damage by occur. Damage caused by pressure washing is not covered under any warranty.

IV. PARTS LIST SECTION

A. Ordering Information

1. List model number and serial number of machine.
2. List part number and serial number of part not the item number.
3. Wherever alternate parts are shown due to product improvement, inspect the part you have and provide additional description as necessary.
4. Specify mode of shipping desired, such as, parcel post, truck, U.P.S., best way, etc.

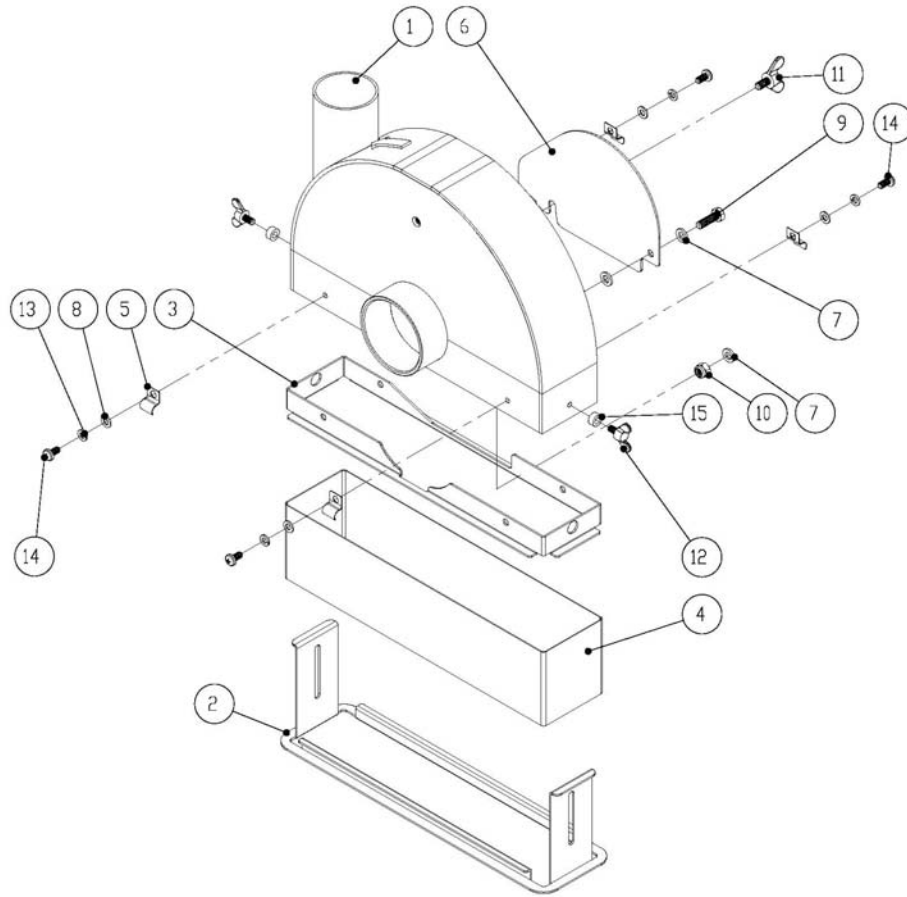
For the nearest Clipper distributor call 1-800-554-8003

Common Replacement Parts

Description	Part Number
WRENCH UNIVERSAL	233041
LOOSE COLLAR	241081
TIGHT COLLAR	241082
NUT 5/8-11 UNC HEX LEFT HAND THREAD	241083
GUARD BLADE	241001
BLADE SHAFT	241016
BEARING RADIAL 6204-RS	212142
HAND WHEEL	241023
BELLOWS	241026
KNOB W/THREADED STUD M6 X 15 1.0	241029
KNOB W/THREADED HOLE M6 X 15 1.0	241032
CUTTING HEAD FLANGE	241037
POINTER WELDMENT	241085
SWITCH EMERGENCY STOP	241059
KNOB W/THREADED HOLE M10 X 1.5 X 50mm DIA	241061
WHEEL 75X28X8mm	241086
WHEEL W/BEARING	241044
VACUUM SHORUD PLATE GC25E UP	241161
SHROUD CLAMP GC25E UP	241162
VACUUM SHOURED GC25E UP	241163

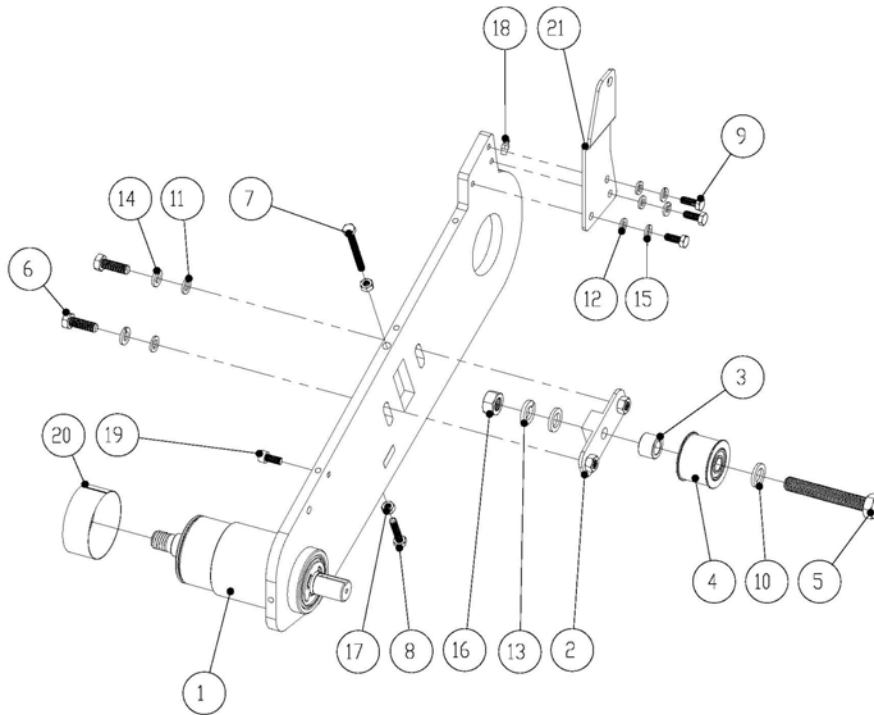
NOTE: All Parts Are Sold As Individual (each) Unless Noted Otherwise

Blades Use Only Norton Diamond Blades. Contact your local Norton Clipper Distributor or Norton Clipper at 1-800-554-8003 for the best blade for the application.



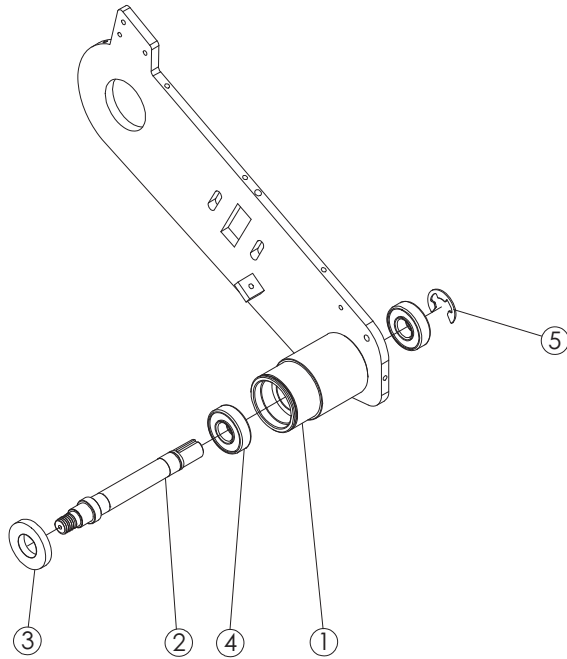
Blade Guard Assembly GC25E UP

Item	Part No	Description	QTY	Type	NOTES
1	241160	BLADE GUARD WELDMENT GC25E UP	1	S	Blade Guard Only GC25E UP ONLY
2	241161	VACUUM SHORUD PLATE GC25E UP	1	W	GC25E UP Only
3	241162	SHROUD CLAMP GC25E UP	1	W	GC25E UP Only
4	241163	VACUUM SHOURD GC25E UP	1	W	GC25E UP Only
5	241164	CLIP RETAINING 6MM	4	W	Sold As Each
6	241002	BLADE SHAFT VENT COVER	1	S	
7	27539	WASHER M6 DIN 125 FLAT	3	S	Sold As Each
8	235065	WASHER M5 DIN125 FLAT	4	S	Sold As Each
9	235048	SCR M6 X 16 1.0 DIN933 8.8	1	S	
10	235136	NUT M6 DIN985 LOCK	1	S	
11	241003	SCR THUMB M6 X 12 1.0	1	S	
12	241165	SCR THUMB M5 X 10 0.8 WING	2	S	Sold As Each
13	502088	WASHER M5 LOCK DIN127B	4	S	Sold As Each
14	241166	SCR M5 X 10 0.8 PAN HEAD DIN7985	4	S	Sold As Each
15	241167	SPACER 10 OD X 5.6 ID X 5 L	2	S	Sold As Each



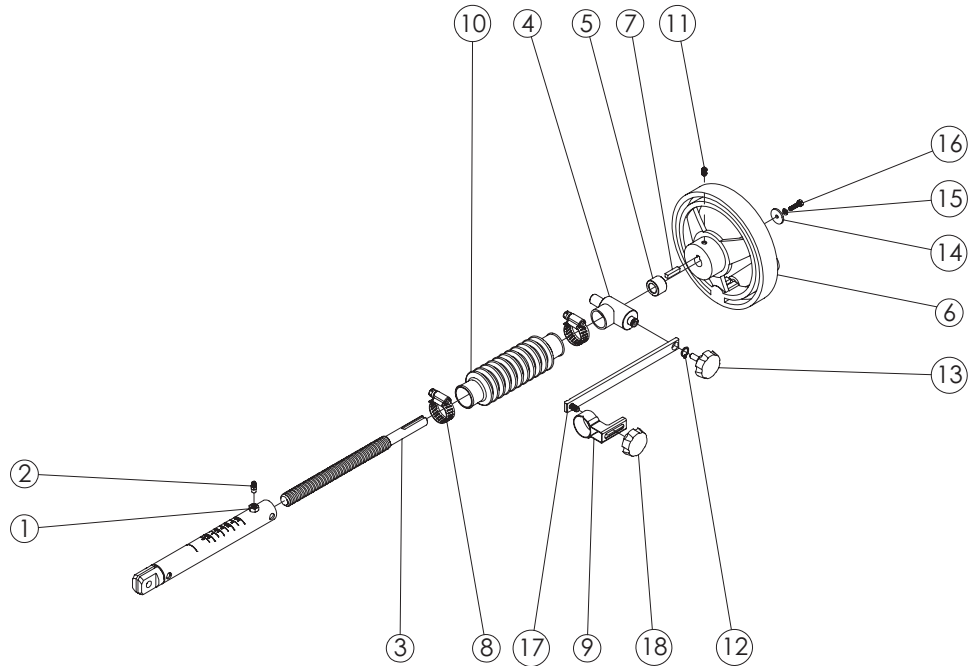
Cutting Head Assembly GC25E UP

Item	Part No	Description	QTY	Type	NOTES
1	241151	CUTTING HEAD W/BEARING GC25E UP	1	S	GC25E UP Only
2	241006	PULLEY IDLER TENSION ADJUSTER	1	S	
3	241007	SPACER INDLER	1	S	
4	241008	PULLEY IDLER ASSEMBLY	1	W	
5	241010	SCR M12 x 80 1.75 DIN933	1	S	
6	300323	SCR M8 X 25 1.25 DIN933 HHC FULL THD	2	S	Sold As Each
7	241011	SCR M6 X 55 1.0 DIN931	1	S	
8	241012	SCR M6 X 30 1.0 DIN933 HEX HEAD CAP	1	S	Sold As Each
9	232113	SCR M6 X 16 1.0 DIN912 SHCS	3	S	Sold As Each
10	27505	WASHER M12 DIN125 FLAT	2	S	Sold As Each
11	232110	WASHER M8 DIN125 FLAT	2	S	Sold As Each
12	27539	WASHER M6 DIN 125 FLAT	3	S	Sold As Each
13	27017	NUT LOCK M12 1.75 DIN985	1	S	
14	300245	WASHER LOCK M8 DIN127	2	S	Sold As Each
15	300279	WASHER LOCK M6 DIN127B	3	S	Sold As Each
16	27007	NUT M12 1.75 HEX DIN934	1	S	
17	300833	NUT M6 1.0 DIN934 HEX	2	S	Sold As Each
18	241009	FIT GREASE M6 X 14 1.0	1	S	
19	232113	SCR M6 X 16 1.0 DIN912 SHCS	1	S	
20	241014	BUSHING BLADE GUARD	1	W	
21	241100	BRACKET DEPTH CNTRL MOUNT	1	S	



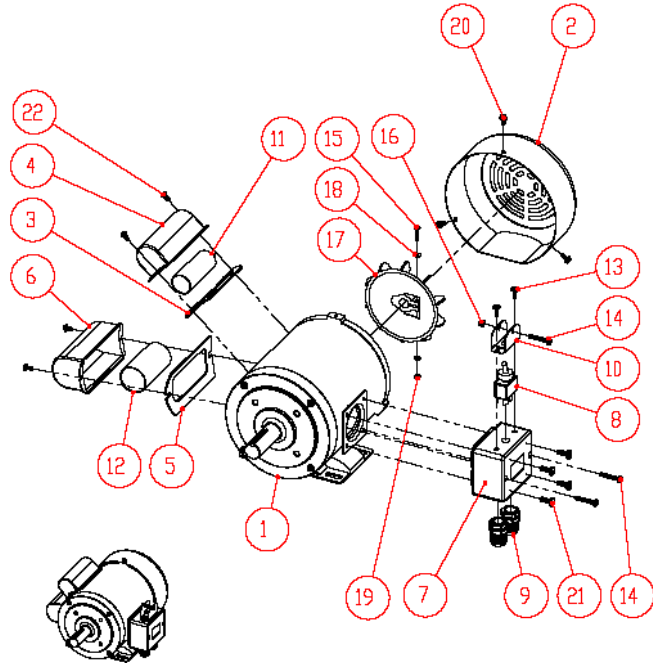
Blade Shaft Assembly GC25E UP

Item	Part No	Description	QTY	Type	NOTES
1	241150	CUTTING HEAD GC25E UP	1	S	GC25E UP Only
2	241016	BLADE SHAFT	1	S	
3	241017	BEARING COVER BLADE SHAFT	1	S	
4	212142	BEARING RADIAL 20MM .787B	2	W	Sold As Each
5	241018	RETAINING RING E-STYLE 19mm X 1.8mm DIN6799	1	S	



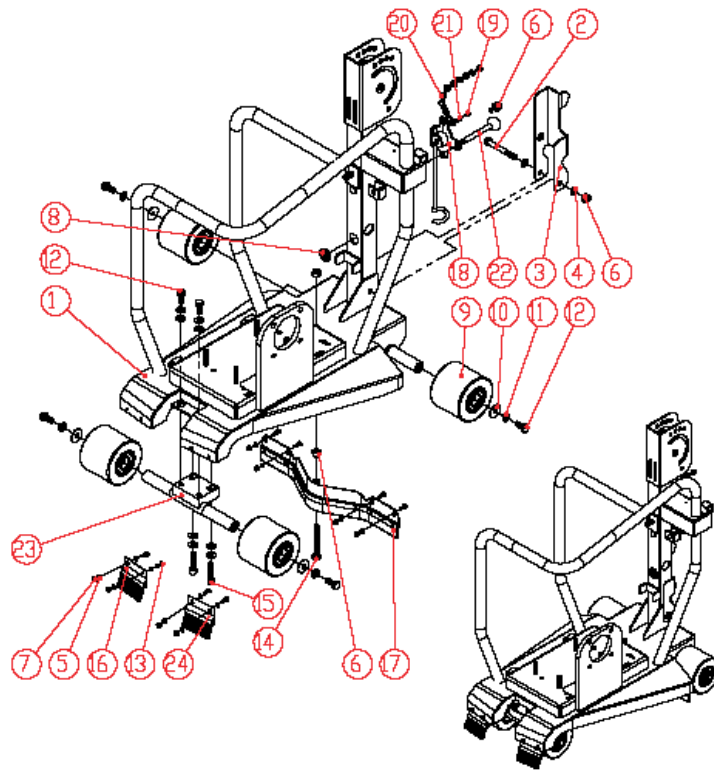
Depth Control Assembly GC25E UP

Item	Part No	Description	QTY	Type	NOTES
1	241090	DEPTH TUBE	1	S	
2	241019	FIT GREASE ZERK M6 X 1.0	1	S	
3	241020	SCR DEPTH CONTROL	1	S	
4	241021	DEPTH CONTROL MOUNT	1	S	
5	241022	SPACER HAND WHEEL	1	S	
6	241023	HAND WHEEL	1	S	
7	9201074	KEY 3/16X3/4	1	S	
8	241024	CLAMP HOSE 13/16" TO 1-3/4" X 1/2"W WORM TYPE	2	S	Sold As Each
9	241025	DEPTH GAUGE POINTER	1	S	
10	241026	BELLOWS	1	W	
11	241027	SCR M5 X 10 0.8 DIN916 SET CUP POINT	1	S	
12	241028	RETAINING RING C-STYLE 10mm X 1.0mm DIN471	1	S	
13	241029	KNOB W/THREADED STUD M6 X 15 1.0	1	S	
14	241089	WASHER M4 X 19mm X 2mm	1	S	
15	241030	WASHER LOCK M4 DIN127	1	S	
16	235057	SCR M4 X 16 0.7 DIN933	1	S	
17	241031	DEPTH CONTROL POINTER BAR	1	S	
18	241032	KNOB W/THREADED HOLE M6 X 15 1.0	1	S	



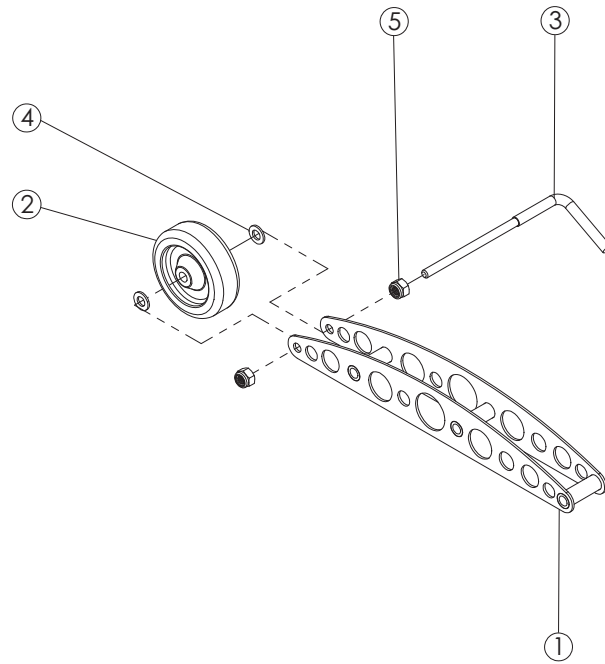
Motor Assembly GC25E UP

Item	Part No	Description	Qty	Type	Notes
1	241112	MOT 2.5HP 115-230v/60/1	1	S	Complete Motor (Items 2 to 21)
2	241113	COVER FAN	1	S	
3	241114	GASKET RUN CAPACITOR COVER	1	W	
4	241115	COVER RUN CAPACITOR	1	S	
5	241116	GASKET START CAPACITOR COVER	1	W	
6	241117	COVER START CAPACITOR	1	S	
7	241118	BOX VOLTAGE CHANGE SWITCH	1	S	
8	241119	TOGGLE SWITCH	1	W	
9	241120	CABLE GLAND PG-11	2	S	
10	241121	GUARD SWITCH	1	S	
11	241122	CAPACITOR RUN	1	W	
12	241123	CAPACITOR START	1	W	
13	241124	SCR 10-24 X 3/8 PHILLIPS ROUND HEAD	2	S	
14	241125	SCR M5 X 40 0.8 DIN7985 PH PHILLIPS	3	S	
15	241126	SCR M5 X 40 0.8 DIN7985 PH PHILLIPS	1	S	
16	241127	NUT M5 0.8 LOCK DIN985	1	S	
17	241128	FAN	1	S	
18	235104	WASHER M4 DIN125 FLAT	2	S	
19	241129	NUT M4 0.7 DIN934	1	S	
20	241124	SCR 10-24 X 3/8 PHILLIPS ROUND HEAD	3	S	
21	241125	SCR M6 X 16 1.0 DIN7985 PH PHILLIPS	4	S	
22	241126	SCR 10-24 X 1/4 PHILLIPS ROUND HEAD	4	S	



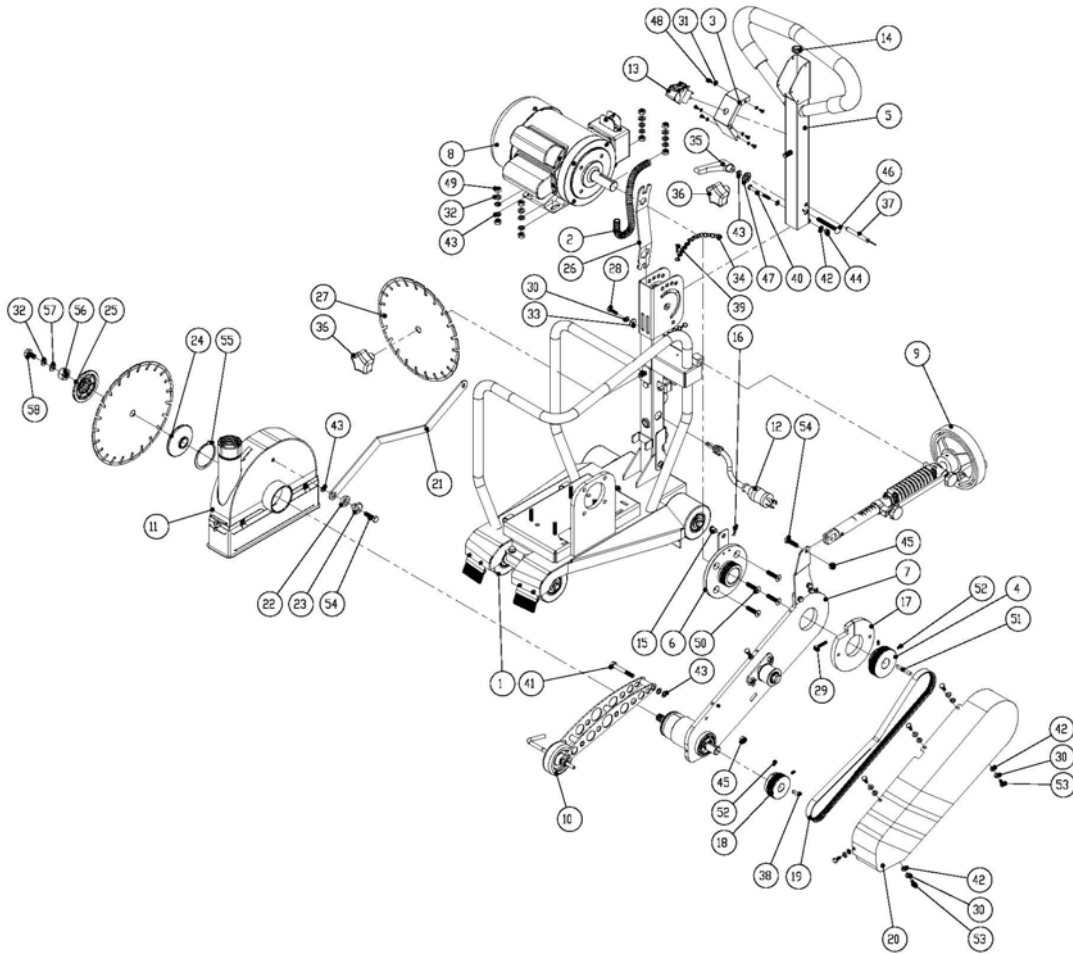
Frame Assembly

Item	Part No	Description	Qty	Type	Notes
1	241101	FRAME GC25E/GC25E UO	1	S	Frame Only
2	241040	SCR M8 X 65 1.25 DIN931 HEX HEAD CAP	1	S	
3	241039	REAR POINTER	1	S	
4	232110	WASHER M8 DIN125 FLAT	7	S	
5	235104	WASHER M4 DIN125 FLAT	17	S	
6	241041	NUT M8 1.25 LOCK DIN985	4	S	
7	241042	NUT M4 0.7 LOCK DIN985	8	S	
8	241058	GROMMET	1	S	
9	241044	WHEEL W/BEARING	4	W	
10	241045	WASHER M8 X 24MM OD DIN9021B	4	S	
11	300245	WASHER LOCK M8 DIN127	8	S	
12	235013	SCR M8 X 20 1.25 DIN933 HEX HEAD CAP	6	S	
13	235103	SCR M4 X 12 0.7 DIN933 HEX HEAD CAP	8	S	
14	241040	SCR M8 X 65 1.25 DIN931 HEX HEAD CAP	1	S	
15	241047	SCR M8 X 35 1.25 SOCKET HEAD CAP	2	S	
16	241048	BRUSH WHEEL OPERATOR'S RIGHT	1	W	
17	241050	SQUEEGEE ASSEMBLY ONLY	1	W	
18	241102	POWER CABLE SUSPENSION ARM	1	S	
19	235099	SCR M4 X 8 0.7 DIN966 PHILIPS	1	S	
20	241056	CHAIN FOR QUICKRELEASE PIN 9" LONG	1	S	
21	241030	WASHER LOCK M4 DIN127	1	S	
22	241092	PIN QUICKRELEASE 5/16" X 2" GRP LENGTH	1	S	
23	241046	FRONT AXLE	1	S	
24	241049	BRUSH WHEEL OPERATOR'S LEFT	1	W	



Front Pointer Assembly GC25E UP

Item	Part No	Description	QTY	Type	NOTES
1	241085	POINTER WELDMENT	1	S	Weldment Only, NO Components
2	241086	WHEEL 75X28X8mm	1	W	
3	241087	FRONT POINTER ROD	1	S	Sold As Each
4	232110	WASHER M8 DIN125 FLAT	2	S	Sold As Each
5	241041	NUT M8 1.25 LOCK DIN985	2	S	Sold As Each



Main Frame Assembly GC25E UP

Item	Part No	Description	QTY	Type	NOTES
1	241152	FRAME ASSY GC25E/GC25E UP	1	S	Includes Wheels – NO additional Components
2	241109	CONDUIT 14.5MM OD X 10MM ID FLEXIBLE	1	S	
3	241105	PANEL SWITCH	1	S	
4	241107	PULLEY 70MM X 24MM 6G J SECTION	1	W	
5	241052	HANDLE BAR	1	S	
6	241110	COLLAR ASSMELBY	1	S	
7	241153	CUTTING HEAD ASSY GC25E UP	1	S	GC25E UP ONLY
8	241112	MOT 2.5HP 115/230/60	1	S	
9	241084	DEPTH CONTROL ASSY	1	S	
10	241073	FRONT POINTER ASSY	1	S	
11	241154	BLADE GUARD ASSY GC25E UP	1	S	GC25E UP ONLY
12	241111	PLUG NEMA L5-15 115V 15A TWIST LOCK	1	S	
13	241104	SWITCH TOGGLE 125V/15A W/SHIELD	1	W	
14	241058	GROMMENT 20 OD X 16 ID X 2MM	1	W	

Main Frame Assembly GC25E UP

Item	Part No	Description	QTY	Type	NOTES
15	241064	PIN CLEVIS 3/8"OD X 1/2" LONG	1	S	
16	241065	PIN 0.073OD X 1-7/16" (3/8" PIN) HAIR COTTER	1	S	
17	241067	COLLAR LOCK	1	S	
18	241071	PULLEY 56.5MM D X 3/4B 6G J SECTION	1	W	
19	241155	BELT 380J6 J SECTION 6 GROOVE	1	W	"J" Section Belt, Six (6) Grooves 380mm Long
20	241156	BELT GUARD GC25E UP	1	S	GC25E UP ONLY
21	241157	ARM STAY LEVEL GC25E UP	1	S	GC25E UP ONLY
22	241079	SPACER M14	1	S	
23	241080	CAM STAY LEVEL	1	S	
24	241082	TIGHT COLLAR	1	S	
25	241081	LOOSE COLLAR	1	S	
26	233041	WRENCH UNIVERSAL	1	S	
27	-NA-	BLADE	1	W	Contact Customer Service
28	241069	SCR M6 X 20 1.0 DIN912 SOCKET HD HEX	1	S	
29	241068	SCR M6 X 30 1.0 DIN912 SOCKET HD HEX	1	S	
30	300279	WASHER LOCK M6 DIN127B	7	S	Sold As Each
31	241030	WASHER M4 LOCK DIN127B	6	S	Sold As Each
32	300245	WASHER LOCK M8 DIN127	4	S	Sold As Each
33	27539	WASHER M6 DIN 125 FLAT	1	S	
34	241056	CHAIN 1.5 D X 22 L	1	S	
35	241091	KNOB M8 X 1.25 ADJUSTABLE	1	S	
36	241061	KNOB W/THREADED HOLE M10x1.5x50	2	S	Sold As Each
37	241092	PIN QUICKRELEASE 5/16" X 2" GRIP L	1	S	
38	9201074	KEY 3/16x3/4	1	S	
39	241057	SCR M4 X 20 1.59 PAN HEAD SELF TAP	1	S	
40	241158	SCR M6 X 18 1.0 DIN933 HEX HEAD CAP	1	S	
41	360146	SCR M8 X 60 1.25 DIN933 HHC FULL THD	1	S	
42	27539	WASHER M6 DIN 125 FLAT	8	S	Sold As Each
43	232110	WASHER M8 DIN125 FLAT	12	S	Sold As Each
44	235136	NUT M6 DIN985 LOCK	1	S	
45	241041	NUT M8 1.25 LOCK DIN985	2	S	
46	241054	SCR 5/16-18 UNC X 2-1/2" CARRIAGE	1	S	
47	241055	WASHER 3/8 WAVE	1	S	
48	235099	SCR M4 X 8 DIN966 PHILIPS	6	S	Sold As Each
49	228116	NUT M8 1.25 DIN439B HEX	8	S	Sold As Each
50	241106	SCR M8 X 35 1.25 SHCS DIN7991	4	S	Sold As Each
51	241108	KEY 5X5X45MM	1	S	
52	241027	SCR M5 X 10 0.8 DIN916 CUP POINT SET	4	S	Sold As Each
53	241062	SCR M6 X 14 1.0 DIN933	6	S	Sold As Each
54	241063	SCR M8 X 30 1.25 DIN933 HEX HEAD CAP	2	S	
55	241076	RING 60MM EXTERNAL C-CLIP	1	S	
56	241083	NUT 5/8-11 UNC HEX LEFT HAND THR	1	S	
57	241159	WASHER M8 THICK FLAT	1	S	
58	8041026	SCR 5/16-18 X 3/4 HEXHDCP	1	S	

Saint-Gobain Abrasives
2770 West Washington
Stephenville, TX 76401
Phone: 800-554-8003
Fax: 800-443-1092



WARNING

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known 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 those dust masks that are specially designed to filter out microscopic particles.