



# Electric Walk-Behind Concrete Curb Machine

Owner's Manual



**! WARNING:** Read and understand all instructions, warnings, and cautions before using this product. Failure to follow the instructions, warnings, and cautions may result in serious personal injury and/or property damage.

Item # 49404

**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.

This Electric Curbing Machine is designed for certain applications only. Northern Tool and Equipment cannot be responsible for issues arising from modification or use of this product in 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

The Curbing Machine is an electrically-driven concrete extruder that operates on common house hold current of 115 volts. This machine produces continuous concrete edging, borders, and mower strips without the use of form work or guide rails. It can produce in excess of 500 feet per hour under ideal conditions with constant feeding. The machine can create circles with a diameter of 36", and will lathe concrete as close as 1/4" from an existing structure. The machine can also extrude the edging in a trench or above the ground as needed.

## Technical Specifications

Electrical Requirements	120V60 Hz
Amperage	5.5 (Start-up)/3.2 (No load)
Motor	3/4 HP; 1730 RPM
Power Switch	2-Position (ON/OFF) Side
Power Cord	51/2-ft. Long/14 AWG x 3C(SJT)
Power Plug	3-Prong, Grounded
Wheel Type	Pneumatic/ 9" Diameter x 3.5" Wide / 30 PSI Inflation Rating / 2-Ply
Concrete hopper opening	17-1/8" Long x 9-3/8" Wide
Overall Dimensions	42"L x 19"W x 34H
Accessories	4" x 6" Mower's Edge Slip Form 4" x 6" Slant Style Slip Form 4" x 6" Curb Style Slip Form 4" x 6" Mowers Edge Trowel 4" x 8" Curb Style Trowel 4" x 7" Slant Style Trowel Finishing Trowel 90 degrees
Weight	187 lbs.

## Important Safety Information

### ⚠ WARNING

- 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 assemble or operate this product until they have read this manual and have developed a thorough understanding of how the product works.
- 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 do the job better and more safely 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**

- 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 the power cord 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 hands after handling.

## **⚠ WARNING**

### **WORK AREA SAFETY**

- Inspect the work area before each use. Keep the work area clean, dry, free of clutter, and well lit. Cluttered, wet, or dark work areas can result in injury.
- Do not use the Curbing Machine where there is a risk of causing a fire or an explosion; e.g., in the presence of flammable liquids, gases, or dust. The machine can create sparks, which may ignite the flammable liquids, gases, or dust.
- Do not allow the Curbing Machine to come into contact with an electrical source. The machine is not insulated and contact will cause electrical shock.
- Keep children and bystanders away from the work area while operating the Curbing Machine. Do not allow children to handle the machine.
- 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 Curbing Machine. Do not use the machine while you are tired or under the influence of drugs, alcohol, or medication.
- 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.
- Use ANSI Z87.1-approved safety goggles or 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.
- Remove adjusting keys or wrenches before connecting the Curbing Machine to the power supply or turning on the machine. A wrench or key that is left attached to a rotating part of the machine may cause personal injury.
- Avoid accidental starting. Ensure that the power switch is in the OFF position before plugging the Curbing Machine into a power outlet. In the event of a power failure while the Curbing Machine is in use, turn the power switch OFF to prevent surprise starting when the power is restored.
- Pinch point hazard. Do not reach into Curbing Machine's hopper while rotating.
- Electrical shock hazard. Be sure the Curbing Machine is properly grounded. Use only outdoor-rated extension cords of proper size.
- DO NOT operate in wet locations.
- Turn power OFF before servicing.

## **⚠ WARNING**

### **ELECTRICAL SAFETY**

- Always check to ensure the power supply corresponds to the voltage on the rating plate.
- Do not abuse the cord. Never pull a Curbing Machine by its power cord, or yank power cords or extension cords from the receptacle. Keep power and extension cords away from heat, oil, sharp edges or moving parts. Replace damaged cords immediately. Damaged cords may cause a fire and increase the risk of electric shock.
- Grounded motors must be plugged into an outlet properly installed and grounded in accordance with all codes and ordinances. Never remove the grounding prong or modify the plug in any way. Do not use any adapter plugs. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded.
- Avoid body contact with grounded surfaces such as pipes, radiators, ranges, and refrigerators. There is an increased risk of electric shock if your body is grounded.
- When operating a Curbing Machine outside, use an outdoor extension cord marked “W-A” or “W.” These cords are rated for outdoor use and reduce the risk of electric shock.
- Use only correct extension cords. If used outdoors, they must be marked for outdoor use. Those cords having 3-prong grounding type plugs and mating receptacles are to be used with grounded Curbing Machines.
- Check the name plate rating of the Curbing Machine. Use of improper size or gauge of extension cord may cause unsafe or inefficient operation of the Curbing Machine. Be sure the extension cord is rated to allow sufficient current flow to the motor. Use the following table to determine the proper extension cord wire gauge:

## **⚠ CAUTION**

### **CURBING MACHINE USE AND CARE**

- Do not force the Curbing Machine to perform an operation other than its intended use. The Curbing Machine does a better and safer job when used in the manner for which they are designed. Plan your work, and use the correct Curbing Machine for the job.
- Do not use a Curbing Machine with a malfunctioning power switch. Any Curbing Machine that cannot be controlled with the power switch is dangerous and must be repaired by an authorized service representative before using.
- Disconnect the power supply from the Curbing Machine and place the power switch in the locked or off position before servicing, adjusting, installing accessories or attachments, or storing. Such preventive safety measures reduce the risk of starting the Curbing Machine accidentally.
- Check for damaged parts before each use. Carefully check that the Curbing Machine will operate properly and perform its intended function. Replace damaged or worn parts immediately. Never operate the Curbing Machine with a damaged part.
- Store the Curbing Machine when it is not in use. Store it in a dry, secure place out of the reach of children. Inspect the Curbing Machine for good working condition prior to storage and before re-use.
- Use only accessories that are recommended by the manufacturer for use with the Curbing Machine. Accessories that may be suitable for one Curbing Machine may create a risk of injury when used with another Curbing Machine.
- Keep the Curbing Machine clean.
- Do not leave the Curbing Machine running unattended.

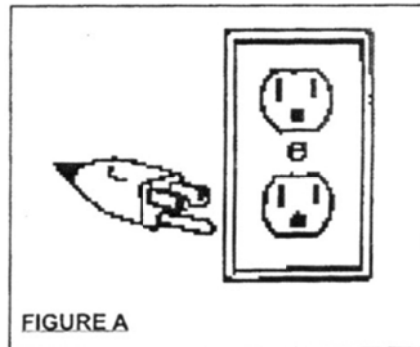
## Grounding

### Grounded Tools: Tools with 3-Prong Plugs

Tools marked with **Grounding Required** have a 3-wire cord and 3-prong grounding plug. The plug must be connected to a properly grounded outlet. If the tool should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user, reducing the risk of electric shock. (See Figure A.)

The grounding prong in the plug is connected through the green wire inside the cord to the grounding system in the tool. The green wire in the cord must be the only wire connected to the tool's grounding system and must never be attached to an electrically live terminal. (See Figure A.)

Your tool must be plugged into an appropriate outlet, properly installed and grounded in accordance with all codes and ordinances. The plug and outlet should look like those in the following illustration.



## Extension Cords

- Grounded tools require a 3-wire extension cord.
- As the distance from the supply outlet increases, you must use a heavier gauge extension cord. Using extension cords with inadequately sized wire causes a serious drop in voltage, resulting in loss of power and possible tool damage.
- The smaller the gauge numbers of the wire, the greater the capacity of the cord. For example, a 14-gauge cord can carry a higher current than a 16-gauge cord. Minimum extension cord wire size is shown in the following table:

Minimum Wire Size Of Extension Cords				
Nameplate AMPS	Cord Length			
	25'	50'	100'	150'
0-6	18 AWG	16 AWG	16 AWG	14 AWG
6-10	18 AWG	16 AWG	14 AWG	12 AWG
10-12	16 AWG	16 AWG	14 AWG	12 AWG
12-16	14 AWG	12 AWG	NOT RECOMMENDED	

- When using more than one extension cord to make up the total length, make sure each cord contains at least the minimum wire size required.
- If you are using one extension cord for more than one tool, add the nameplate amperes and use the sum to determine the required minimum cord size.
- If you are using an extension cord outdoors, make sure it is marked with the suffix **W-A** (**W** in Canada) to indicate it is acceptable for outdoor use.
- Make sure your extension cord is properly wired and in good electrical condition. Always replace a damaged extension cord or have it repaired by a qualified electrician before using it.
- Protect your extension cords from sharp objects, excessive heat, and damp or wet areas.

## Before Each Use

1. Make sure the Power Switch (#14) is OFF.



2. Make sure the following parts are properly attached to the machine and adjusted:

- The Rear Wheel Brackets (#28).
- The desired Slip Form (Part# 1A,#1B, #1C)
  - a. loosen these two nuts.



- b. Unload the bolts



- c. Change the mold that you need (1A, 1B or 1C)

- d. fit the bolts and nuts again. (#2, #3, #4, #5)

- The Compaction Ram (64). (See Parts Diagram.)
3. Plug the Power Cord into a proper extension cord. Then, plug the extension cord into the nearest 115 volt, grounded, electrical outlet. (See Parts Diagram.)
  4. Turn the Power Switch ON.

## ⚠ CAUTION

Always make sure that the Power Switch (14) is OFF and the Curbing Machine is unplugged from its electrical outlet before making adjustments to the Curbing Machine.

5. Inspect the general condition of the Curbing Machine. Check for loose screws, misalignment or binding of moving parts, cracked or broken parts, damaged electrical wiring, and any other condition that may affect its safe operation. If abnormal noise or vibration occurs, have the problem corrected before further use. Do not use damaged equipment.
6. Fill the Pneumatic Tires with air. The three Pneumatic Tires must be properly filled with air before using the Curbing Machine. Each tire requires 30 PSI (207 kPa) of air pressure. Do not overfill.
7. Install a Slip Form. The Curbing Machine comes with three styles of Slip Forms: Mower's Edge (1A), Curb Style (1C), and Slant Style (1B). To install a Slip Form:
  - a. Align the mounting holes in the Slip Form with the mounting holes located in the front/bottom of the Body Assembly (13).
  - b. Then secure the Slip Form in place using the Bolts (5), Spring Washers (4), Flat Washers (3), and Lock Nuts (2).



### Ground Preparation

- Make sure the ground and the trench are firm and compacted.
- If you have straight lines, make sure to set a string-line (not included) to keep the Curbing Machine from wandering off line.
- The trench for the curb should be cut with a good, sharp edging shovel or square mouth shovel (not included). The ground should be relatively dry. The trench also needs to be wide enough to accommodate the turns and curves the Curbing Machine will have to make.

Trenching Guide (New Landscape Before Sod)		
	Trench Depth	Trench Width
Mower Style Without Top Soil	On Ground	10"
Mower Style With Top Soil	1"	10"
Curb/Slant Style Without Top Soil	2"	10"
Curb/Slant Style With Top Soil	3-1/2"	10"
Mower Style With Existing Sod	1-1/2"	10"
Curb/Slant Style With Existing Sod	3-1/2"	10"

## Concrete Preparation

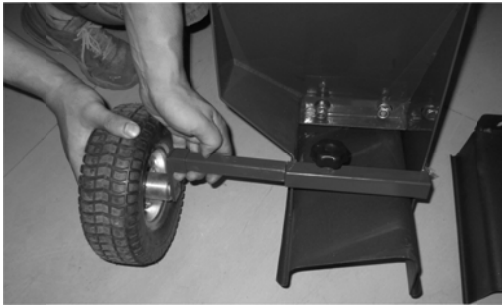
- It is extremely important to have a consistent mix. If it is too wet, it will slump. If it is too dry, it will crack.
- The sand should be rough, not having gravel much larger than match head. The sand should be free of dirt and debris. Mortar sand is recommended. DO NOT use silica sand.
- The finished mix should have a consistency similar to wet sand used on the beach to make sandcastles,
- The following procedure is typically successful when mixing in a mortar mixer (not included). The mix is 5 parts sand to 1 part cement.
  1. With the mortar mixer running, dump in two five-gallon buckets of sand.
  2. Dump in 1/2 of a 94 pound bag of Portland cement.
  3. Add 3 more five-gallon buckets of sand.
  4. Add water until the mix reaches the proper slump. You should not be able to squeeze water out of the mix. Do not over mix.

## Operating Instructions

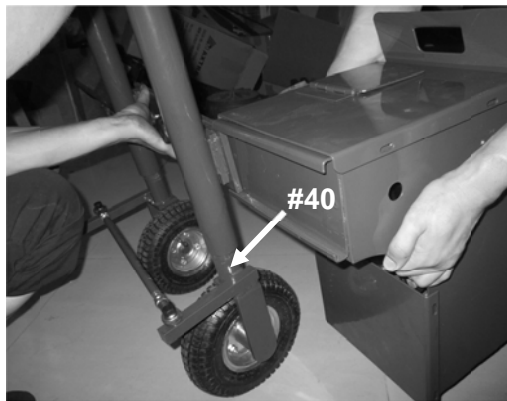
1. When you open the cartons, you will find the following parts.



2. Install the front wheel (#9)



3. Install the back wheel and handle(#9,#40)



**NOTE:** It is recommended that you first test the Curbing Machine in your driveway or garage. Experiment by running concrete sand or mortar sand (slightly moist and without cement) to get an idea of how to run the Curbing Machine. This experiment is done without risk because it will not set up or need to be towed.

## ⚠ WARNING

Make sure the Power Switch (14) is OFF and the Curbing Machine is unplugged from its electrical outlet before making any adjustments inside the Motor and Gear Box compartment or the Hopper. (See the Parts Diagram).

5. Check to make sure the Compaction Ram (64) is moving back and forth in the bottom of the Hopper without scraping or binding on either edge. By pulling the Shield (12) off the Hopper, you can observe the inner workings of the machine and make any necessary adjustments.

**NOTE:** To produce curbing, the Front Pneumatic Tire should be removed, leaving the front of the Slip Form on the ground.

6. Adjust the two Rear Wheel Brackets so that the front of the Slip Form is on the ground and the back of the Slip Form is raised about 1/4 inch above the ground.
7. Add cement into the Drum with whole full shovels at a time. The Curbing Machine will start to propel itself as it extrudes a curb. Continue to add cement into the Drum. Adjust the rate of adding cement to the Drum according to the feed speed of the Curbing Machine.
8. When finished, turn the Power Switch OFF and unplug the machine from its electrical outlet.

**Tips:** When you are feeding, please don't throw too much, not overflow from the Hopper.  
If the curbing have a small damage on the corner or side, you can repair it by Hand Trowel.

### After Each Use

#### **▲WARNING**

Check that the Power Switch (14) is OFF and the Curbing Machine is unplugged from its electrical outlet before performing any inspection, maintenance, or cleaning procedures to avoid accidental starts that can cause injury.

Clean the Hopper, Chute, Slip Form, and exterior Body of the Curbing Machine thoroughly with water. Do not get water into the Motor compartment or on the power switch or cable.

Check for wear or damage to the parts of the Curbing Machine.

After used, please clean and dry it. Put it on the dry and cool place, don't expose in the sun for a long time. If you want to delivery it by truck, you'd better put and fix it on the pallet.

## Maintenance

### ⚠ WARNING

Check that the Power Switch (14) is OFF and the Curbing Machine is unplugged from its electrical outlet before performing any inspection, maintenance, or cleaning procedures to avoid accidental starts that can cause injury.

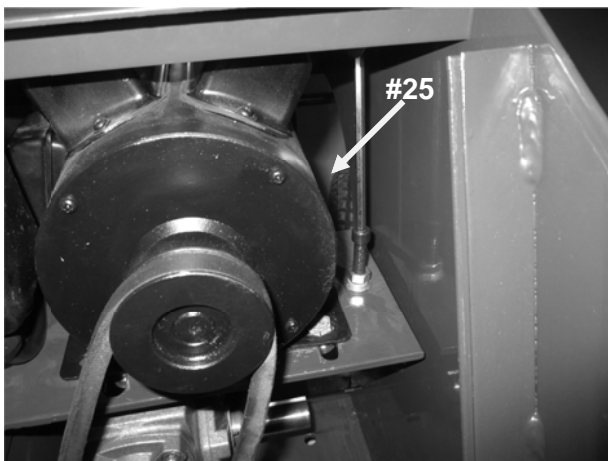
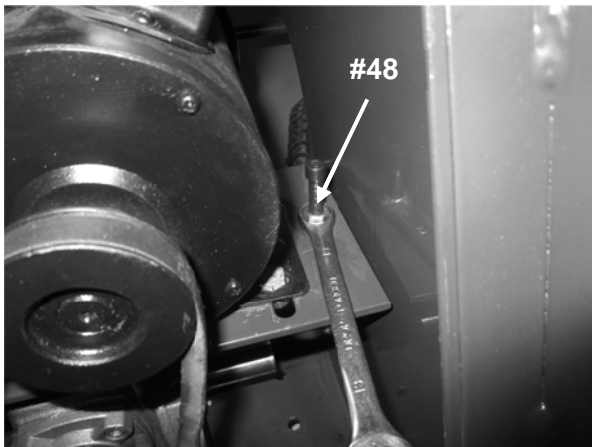
Maintain the Curbing Machine by adopting a program of conscientious repair and maintenance in accordance with the following recommended procedures:

When you don't need it, please make sure that it's clean and dry. And keep it in cool, dry and well ventilated place. Please pay attention to the status of the machine regularly.

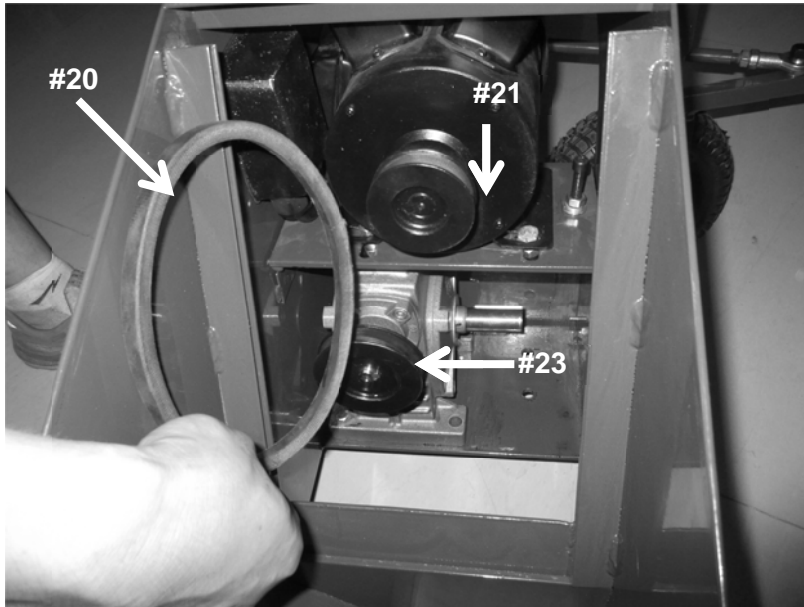
### Replace the V-Belt

Replace the V-Belt as needed using the following steps. (See the Parts Diagram.)

1. Loosen the four Bolts (#48) at the base of the Motor (25).

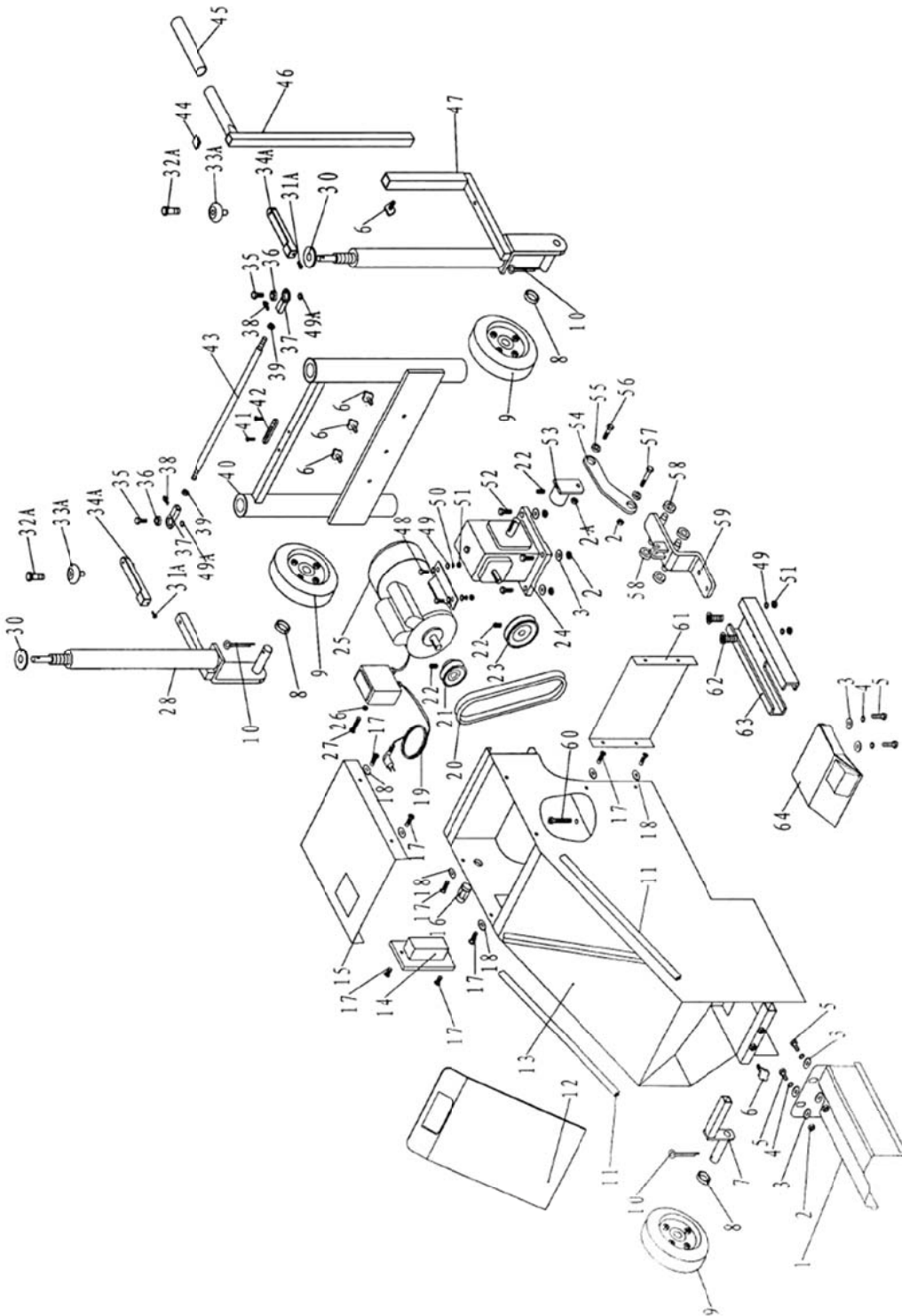


2. Move the Motor (#25) towards the Gear Box (#24).
3. Slip the V-Belt (#20) off the two Pulleys (#21, #23).



4. Install a new V-Belt (#20 size A500) onto the two Pulleys (#21, #23.)
5. Move the Motor (#25) back to its original position then firmly retighten the four Bolts (#48).

## Parts Diagram



## Parts List

Part No.	Description	Quantity
1	Slip Form	3
2	Self-Lock Nut M10	8
3	Flat washer 10	10
4	Spring washer 10	4
5	Bolt M10X25	4
6	Locking Grip Q	5
7	Front Wheel Rod Assembly	1
8	Shaft Sleeve	3
9	Wheel	3
10	Open Pin 4X30	3
11	Protection Rim	2
12	Shield	1
13	Body Assembly	1
14	Power Switch	1
15	Upper Cover Plate	1
16	Grommet	1
17	Cross Head Twist Bolt M5X10	10
18	Flat Washer 5	8
19	Cable A	1
20	V-belt A500	1
21	Pulley	1
22	Concave Head Screw M8X10	3
23	Pulley	1
24	Gear Box	1
25	Motor	1
26	Nut M5	2
27	Cross Head Twist Bolt M5X16	2
28	Wheel Bracket I	1
30	Washer	2
31	Bolt M6X30	2
32A	Handle Pin	2
33A	Plastic Grip	2
34A	Handle	2
35	Bolt Pin 2	2
36	Bearing GE10E	2
37	Turning Ball Head	2
38	Oil Cup M6	2
39	Nut M10	2
40	Stand Assembly	1
41	Cross Head Twist Bolt M3X10	2
42	Balancer	1
43	Steering Rod	1
44	Square Block S	1
45	Handrail Sleeve	1
46	Steering Handle	1
47	Wheel Bracket II	1
48	Bolt M8X25	4
49	Flat Washer 8	15
49A	Cover	2
50	Spring Washer 8	4
51	Self-Lock Nut M8	6
52	Bolt M10X35	4

Part No.	Description	Quantity
53	Crank Arm	1
54	Link Arm	1
55	Bearing 61900	2
56	Bolt Pin 1	1
57	Bolt Pin 3	1
58	Bearing 6001	4
59	Push/Pull Assembly	1
60	Inner Hex Screw M8X55	1
61	Lower Cover Plate	1
62	Cross Head Twist Bolt M8X20	2
63	Track	1
64	Compaction Ram	1

## Troubleshooting

Problem	Solution
Curbing Machine will not turn on	<ul style="list-style-type: none"> <li>• Make sure the Power Switch is in the "ON" position.</li> <li>• Make sure to use the proper size extension cord.</li> <li>• Make sure the extension cord is connected to a working, 115 volt, grounded, electrical outlet.</li> <li>• Have a qualified service technician examine the machine.</li> </ul>
Curbing Machine extrudes poorly.	<ul style="list-style-type: none"> <li>• Make sure to properly mix the cement, sand, and water.</li> <li>• Make sure the Slip Form is properly attached to the machine.</li> <li>• Make sure to properly feed the Hopper.</li> <li>• Make sure the Compaction Ram is moving freely on its Track.</li> <li>• Make sure the Crank Arm has been properly adjusted (length and stroke of the Compaction Ram) for the job at hand.</li> <li>• Have a qualified service technician examine the machine.</li> </ul>

## 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 will be required: model number, serial number/lot date code, and description.
- The distributor reserves the rights to make design changes and/or 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.



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