



## Mini Cement Mixer

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 # 49414

**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 Cement Mixer 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 Cement Mixer is designed for mixing cement. It is small, efficient, and easy to use.

## Technical Specifications

Motor	120VAC, 60Hz, 200 Watts
Motor Speed	1200 RPM
Drum Opening	10" (255mm)
Drum Rotation Speed	30 RPM
Drum Capacity	1.77 cu. ft.

## 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 tool where there is a risk of causing a fire or an explosion; e.g., in the presence of flammable liquids, gases, or dust. The tool can create sparks, which may ignite the flammable liquids, gases, or dust.
- Do not allow the tool 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 tool.
- 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**

### **ELECTRICAL SAFETY**

- Always check to ensure the power supply corresponds to the voltage on the rating plate.
- Do not abuse the cord. Never carry or pull a Cement Mixer 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 an electric Cement Mixer 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 Listed 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 Cement Mixers.
- Check the name plate rating of the Cement Mixer. Use of improper size or gauge of extension cord may cause unsafe or inefficient operation of the Cement Mixer. 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:

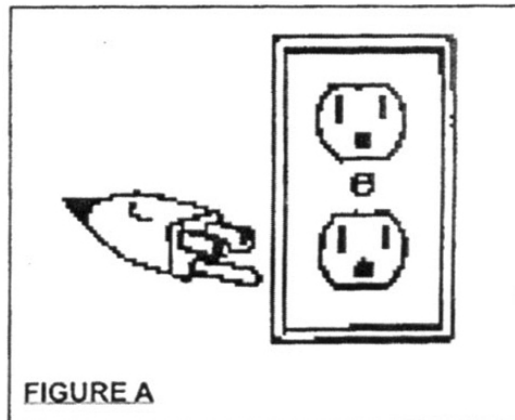
## Grounding

### 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. Double Insulated tools can use either a 2- or 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 number 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:

<b>Minimum Wire Size Of Extension Cords</b>				
<b>Nameplate AMPS</b>	<b>Cord Length</b>			
	<b>25'</b>	<b>50'</b>	<b>100'</b>	<b>150'</b>
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.



## **⚠ CAUTION**

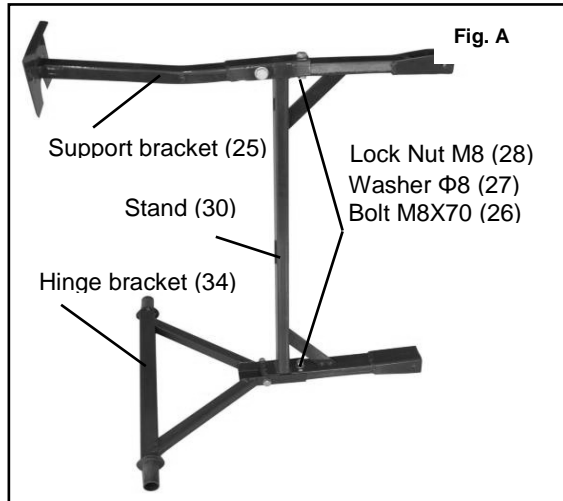
### **CEMENT MIXER USE AND CARE**

- Do not force the Cement Mixer to perform an operation other than its intended use. Cement Mixers do a better and safer job when used in the manner for which they are designed. Plan your work, and use the correct Cement Mixer for the job.
- Do not use a Cement Mixer with a malfunctioning power switch. Any Cement Mixer 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 Cement Mixer 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 Cement Mixer accidentally.
- Check for damaged parts before each use. Carefully check that the Cement Mixer will operate properly and perform its intended function. Replace damaged or worn parts immediately. Never operate the Cement Mixer with a damaged part.
- Store the Cement Mixer when it is not in use. Store it in a dry, secure place out of the reach of children. Inspect the Cement Mixer for good working condition prior to storage and before re-use.
- Use only accessories that are recommended by the manufacturer for use with the Cement Mixer. Accessories that may be suitable for one Cement Mixer may create a risk of injury when used with another Cement Mixer.
- Keep guards in place and in working order.
- Keep the Cement Mixer blades clean.
- Do not leave the Cement Mixer running unattended.

## Assembly Instructions

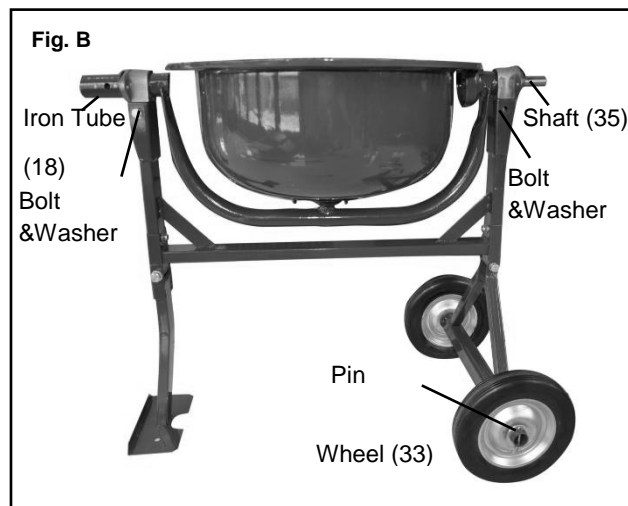
### See Figure A

1. Place Stand (30) onto Hinge Bracket (34) so that the bolt holes line up.
2. Insert Hex Bolts (26) with Washer (27) through the holes from one side, then Washer (27) and Lock Nut (23) from the other side, and tighten with a wrench.
3. Insert Support Bracket (25) onto Stand (30) so that the bolt holes line up.
4. Insert Hex Bolts (26) with Washer (27) through holes from one side, then Washer (27) and Lock Nut (23) from the other side, and tighten with a wrench.



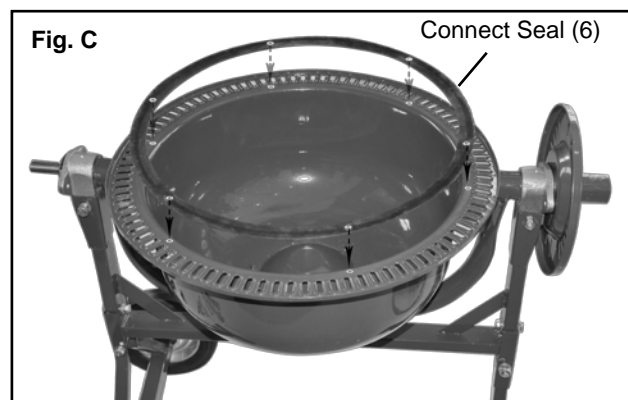
**See Figure B**

5. Place Stand upright.
6. Place Wheel (33) onto Hinge Bracket (34) axle, and slip on the Washer (32) after the wheel.
7. Insert Pins (31) into the Hinge Bracket (34) axle holes, outside each Flat Washer. The pin should be touching the washer, not the wheel.
8. Bend each side of the Pins outward so they do not fall out.
9. With two people, set the Drum Lower (8) with attached Support Arm assembly into Stand assembly so that the Shaft (35) is on the wheel side and the Iron Tube (18) is on the Support Bracket (25) side of the assembly.
10. Insert Hex Bolts (59) with Washer through holes from one side, then Washer and Lock Nut from the other side, and tighten with a wrench.



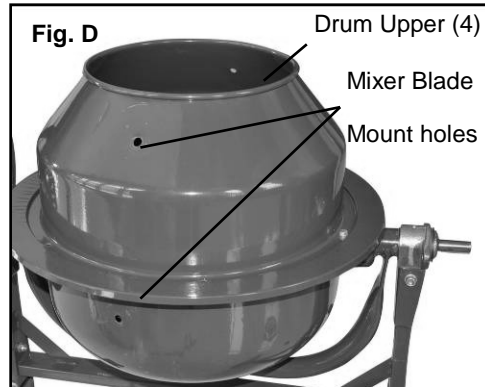
**See Figure C**

11. With the help of another person, attach Connector Seal (6) to the Drum Lower (8), making sure that the holes in both align. This Connect Seal must be flat on the Drum Lower to ensure a proper seal.



**See Figure D**

12. Carefully place the Drum Upper (4) onto the Connector Seal. Make sure that the holes in both align. Note: When placing the Drum Upper, align the Mixer Blade mounting holes in the side of the drums as shown in Figure D. If they are too far away from each other, the Mixer Blades holes will not match up with the mounting holes on the Drums.



**See Figure E**

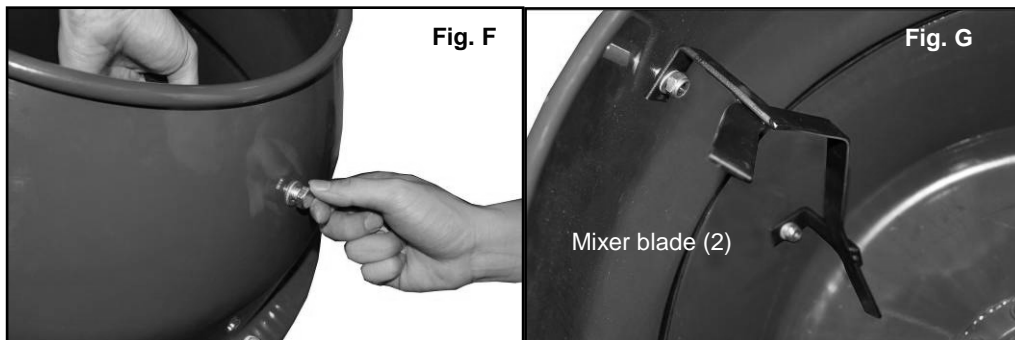
13. Move the Connector Seal from the inside to make sure the holes of Drum Upper, Connector Seal, and Drum Lower align in a line. Insert Bolt (58) with Washer (57) through the holes and rotate them by hand. Note: Make sure that six screws are in place, and tighten with a wrench.



(Figure E)

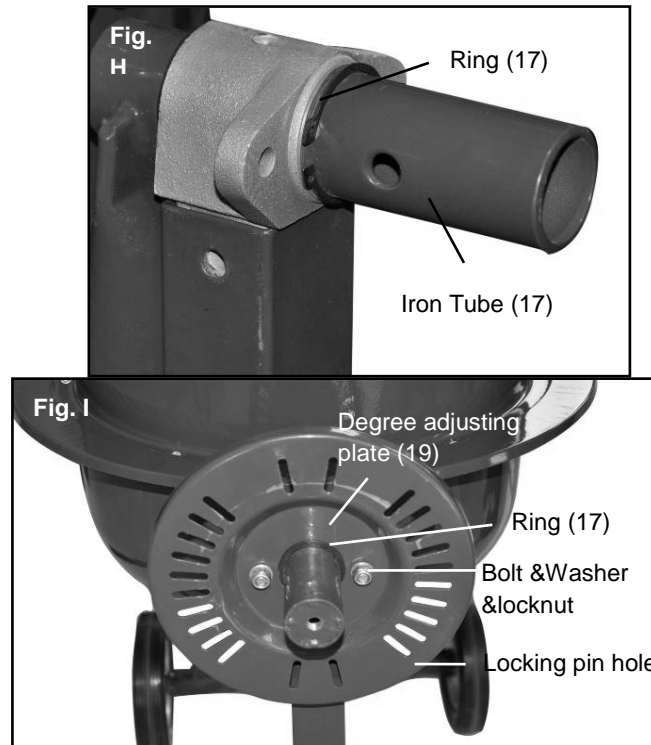
**See Figure F and Figure G**

14. Mount each Mixer Blade (2) inside the assembled Drum. The V-shaped bend in the Mixer Blade should point in the direction of the Drum rotation (clockwise). Insert Hex Bolt (1) with Washer (3) from outside, then Washer (3) and Lock Nut (5). Tighten with a wrench.



**See Figure H and Figure I**

15. Mount the Degree Adjusting Plate (19) to the Iron Tube (18) using two Hex Bolts (24) with Washer (27) inserted from the outside, and tighten with a wrench.



**See Figure J**

16. Attach Degree Adjusting Wheel (20) to Iron Tube (18) shaft.

- a. Insert Coil Spring (22) into the lower hole.
- b. While holding the spring in place, slide the wheel over the iron tube.

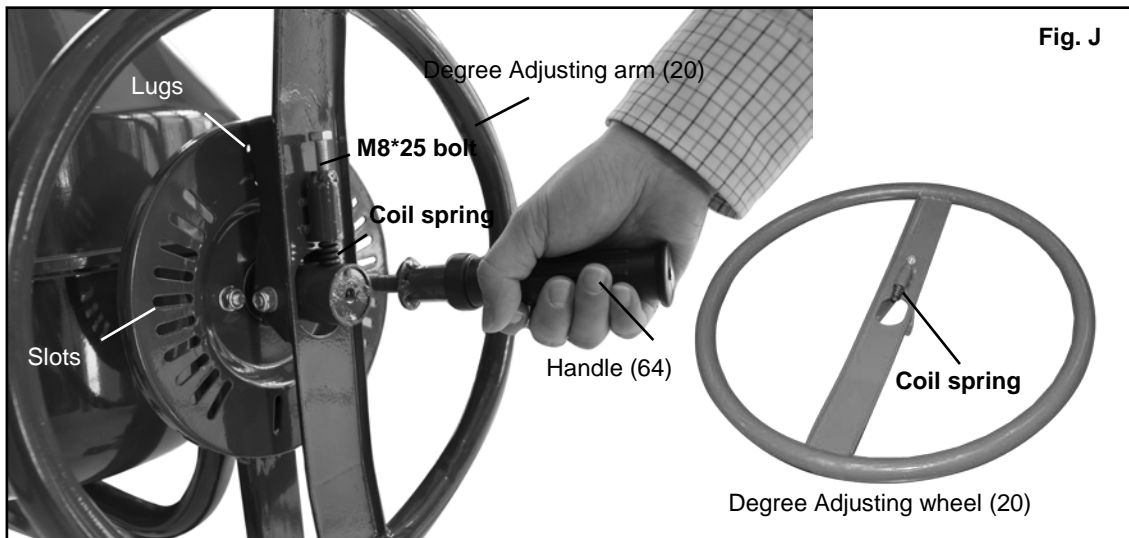
Note: The Bolt (69) usually have been secured in place, this step may need a little exertion in order to compress the spring sufficient to be able to slip the wheel onto the Iron Tube. If you can't compress the coil spring in place, gradually loosen the Bolt (69) then try to slip the wheel onto the Iron Tube. Tighten this bolt against the Coil Spring.

- c. Line up the holes in the bracket on the wheel with the hole drilled in the Iron Tube, then insert the Bolt (23) with Flat Washer at the bolt head.

Note: You will find it an easier task to line up the holes on one side of bracket only, to begin with. Enter the bolt, and then use that as a pivot, by pushing the wheel IN to square it up, in order to line up the holes on the other side. When the holes at the opposite side are aligned, tap the bolt through GENTLY to avoid damaging the threads.

- d. Screw the locknut against the bracket, but not so tight so as to prevent the wheel from pivoting about the bolt. The wheel must be allowed to pivot about the bolt so that the lugs on the wheel can be engaged or disengaged from the slots in the Degree Adjusting Plate.

17. Screw the Handle (64) into the Degree Adjusting Wheel (20) hub and tighten.

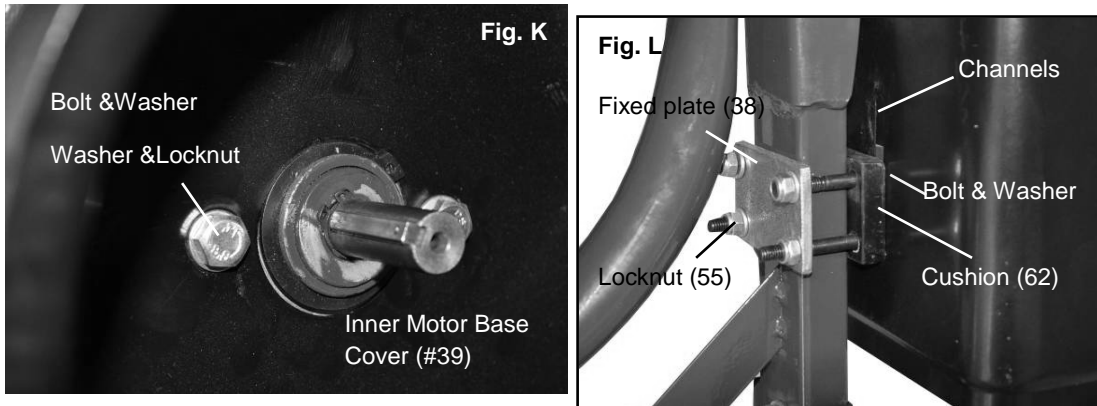


**See Figure K and Figure L**

18. Mount the inner Motor Base Cover and Motor Mount Plate.

- a. To prepare the Motor (42) for mounting, remove the Motor from the Inner Motor Base Cover (39) by unthreading the two Hex nuts and Hex bolts holding it in place for shipping.
- b. Mount the Inner Motor Base Cover (39) to the Shaft (35), slide Flat Washers onto two Bolts (24), and insert the Bolts through the Motor Base Cover and the Iron Tube Fixture (15). Secure with Washers and Lock Nuts.
- c. Attach the Motor Mount Plate (40) to the Inner Motor Base Cover (39), insert four Bolts (37) through the holes in the Fixed plate (38), Cushion (62), Motor Base Cover channels. Thread Locknuts (55) and washer onto the Bolts, but DO NOT tighten the locknut at this stage.

Note: The Motor Mount Plate must be adjusted up or down to tighten the V Belt (61).



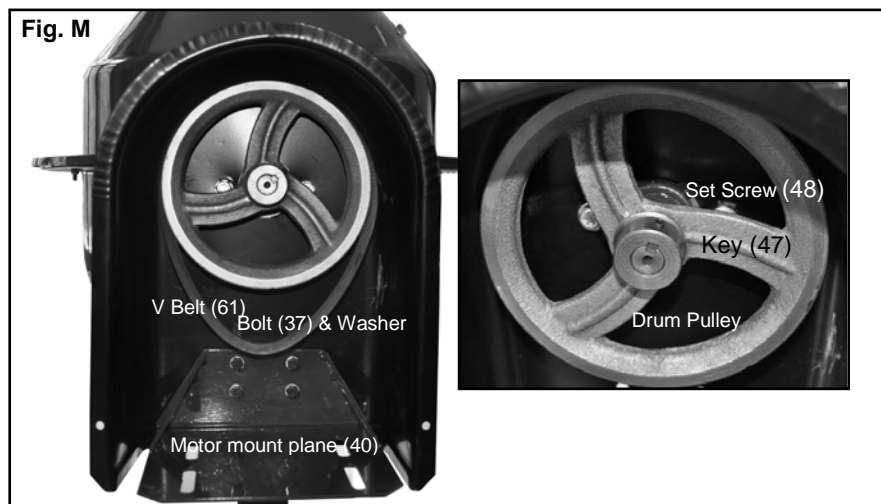
**See Figure M**

19. Mount the Pulley and Belt.

- a. Clean the Shaft (35) of all plastic protective material and other debris. Also clean out debris from the Drum Pulley (49) center hole.
- b. Position the Drum Pulley (49) so that the Set Screw hole (48) is facing outward. Squarely push the Pulley center onto the Shaft so that the groove in the Drum Pulley engages the Key (47). The Pulley should be flush with the step on the Shaft. Thread the Set Screw (48) and tighten in place.

Note: Do not pound the Drum Pulley onto the Shaft. Damage can occur resulting in a loose fit.

- c. Place the V Belt (61) around the Drum Pulley (49).





See Figure N and Figure O.

20. Mount the Motor.

**WARNING:** The Motor is attached to the Outer Motor Base Cover (43) by a power cable. While installing the Motor, have a helper hold the Cover out of the way, without placing tension on the power cable.

- a. Put the Motor (42) over the V Belt (61). Make sure that the motor pulley (51) is directly under the Drum Pulley.
- b. Allow the motor to drop as far as possible under its own weight in order to tension the drive belt. Tension is correct when there is approximately 1/4" total deflection at the center of the belt run when using moderate thumb pressure.

Note: This step may require adjusting the Motor Mount Plate (40) up or down.

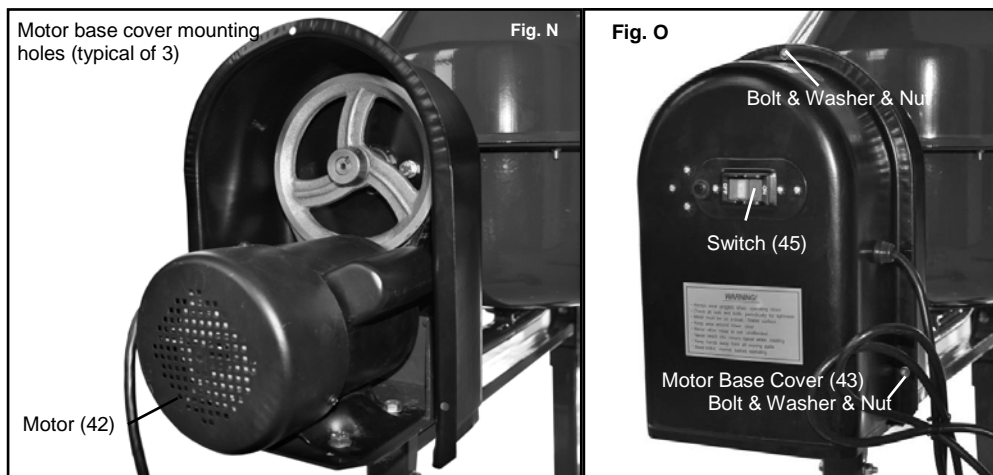
- c. Tighten the mounting bolts progressively ensuring the support plate is parallel to the ground. This step requires removing the Motor (42) first.

Note: It usually requires multiple attempts on (step b, step c) to get the right position of Motor Mount Plate (40).

- d. Secure the Motor, slide Flat Washers on four Bolts (41), then slide the Bolts up through the bottom of the Motor Mount Plate and the Motor. Secure in place with locknut.
- e. Check if Motor and belt turns true. Hand-turn the Drum Pulley (49) and verify that the Motor Pulley and Drum Pulley do not rub against any other part, and that the pulleys turn true. Make adjustments to Motor location as required.

21. Mount the Outer Motor Base Cover (43) to the Inner Motor Base Cover (39) using three Bolts (46), Washers (70), and Nuts (71). Make sure that the power cord from the Motor to the Switch (45) does not come in contact with moving parts. (Figure O)

22. The Cement Mixer assembly is complete. Go back and retighten all screws, nuts, and bolts.



## Operating Instructions

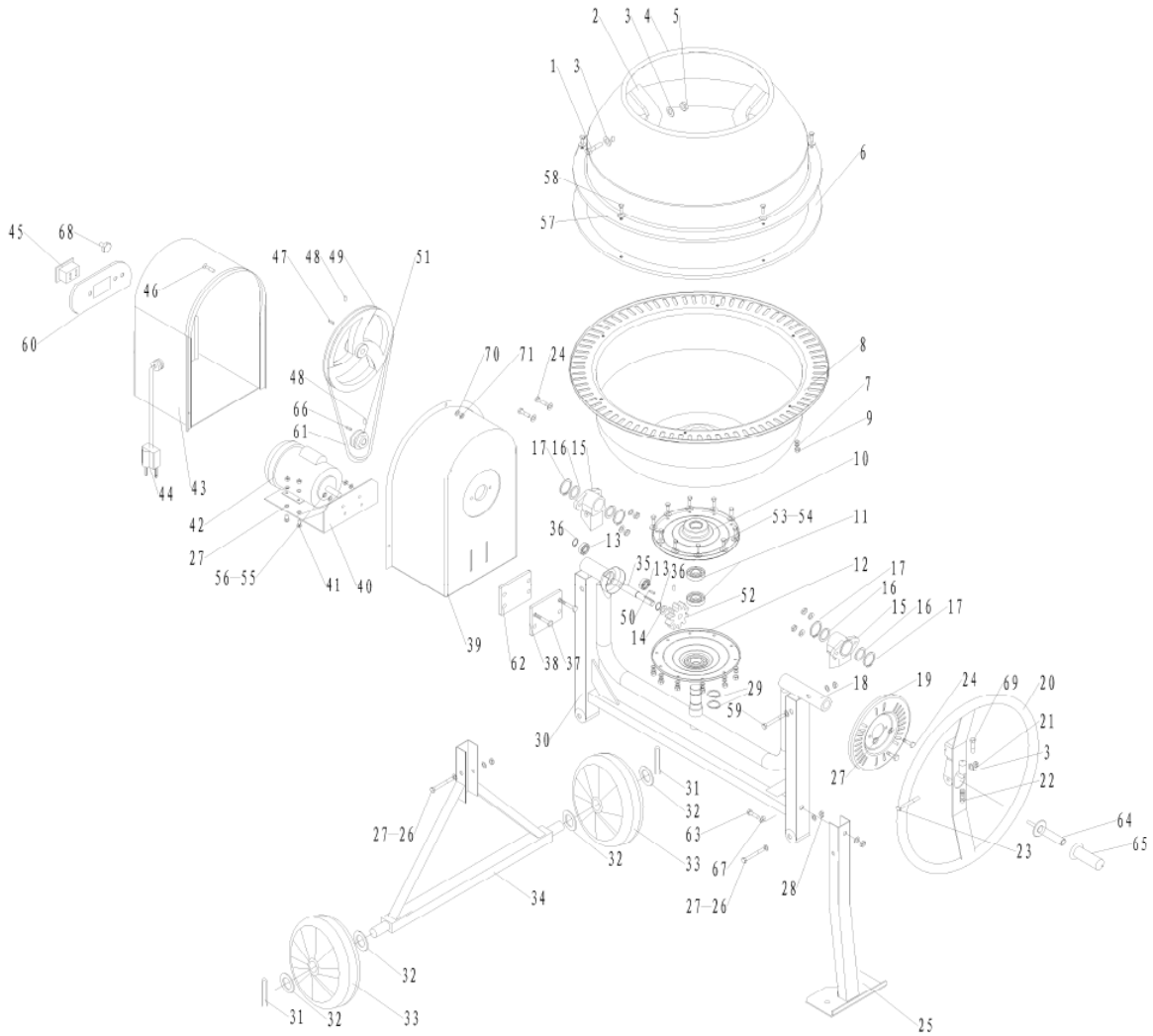
1. Place the Cement Mixer on a solid, level surface.
2. Connect the Power Cord (44) to an electric outlet (or properly rated grounded three prong extension cord).
3. Add material to the Drum. Typical maximum quantities include: 1 gallon water with 2 shovels of cement and 8 shovels of aggregate rock (using a size 3 shovel, not included).
4. Do not attempt to move the Cement Mixer when it is full and/or in operation. Injury to personnel could occur.
5. Adjust the Drum angle by pulling on the Degree Adjusting Wheel (20). First, disengage the locking pins on the Iron Tube Fixture (15) and push on Arm until the desired angle is reached. Re-engage the locking pins.
6. Flip the power switch to the ON position.

## Maintenance

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

- After each use, immediately wash out all debris from the inside and outside of the Cement Mixer.
- Keep the motor clean and free of buildup.
- Do not apply water in or around the Motor Base Cover.
- Retighten belt after the every 25 hours of use. The belt should be able to be pressed in no more than 1/4".
- Periodically recheck all nuts, bolts, and screws for tightness.
- Lightly grease all moving parts.

# Parts Diagram



## Parts List

Part No.	Description	Quantity
1	Bolt M8x20	4
2	Mixer Blade	2
3	Washer Φ8	8
4	Drum Upper	1
5	Lock Nut M8	4
6	Connector Seal	1
7	Washer Φ6	6
8	Drum Lower	1
9	Lock Nut M6	6
10	Bearing Cover Upper	1
11	Bearing 6204	2
12	Bearing Cover Lower	1
13	Bearing 6002	2
14	Washer Φ15	1
15	Iron Tube Fixture	2
16	Washer Φ38	4
17	Ring Φ38	4
18	Iron Tube	1
19	Degree Adjusting Plate	1
20	Degree Adjusting Wheel	1
21	Lock Nut M10	1
22	Coil Spring	1
23	Bolt M10x65	1
24	Bolt M8x20	4
25	Support Bracket	1
26	Bolt M8x60	4
27	Washer Φ8	8
28	Lock Nut M8	14
29	Ring Φ20	2
30	Stand	1
31	Pin Φ5x40	2
32	Washer Φ26	2
33	Wheel	2
34	Hinge Bracket	1
35	Shaft	1
36	Dust Cover	2
37	Bolt M6x50	4
38	Fixed Plate	1
39	Motor Base Cover	1
40	Motor Mount Plane	1
41	Bolt M8x20	4
42	Motor	1
43	Motor Base Cover	1
44	Power Cord	1
45	Switch	1
46	Tap Screw M5x10	6
47	Key C5x35	1
48	Set Screw M5x10	3
49	Pulley	1
50	Key C5x20	1
51	Pulley	1
52	Gear	1

<b>Part No.</b>	<b>Description</b>	<b>Quantity</b>
53	Bolt M6x20	6
54	Big Washer Φ6	6
55	Lock Nut M6	4
56	Washer Φ6	8
57	Washer Φ6	12
58	Bolt M6x20	6
59	Bolt M8x60	2
60	Switch Plane	1
61	V Belt 813	1
62	Cushion	1
63	Bolt M8x35	2
64	Handle	1
65	Handgrip Cover	1
66	Key C5x25	1
67	Washer Φ8	4
68	Protection	1
69	Bolt M8x25	1
70	Washer Φ5	9
71	Nut M5	6

## Troubleshooting

Problem	Solution
The Mixer will not turn on.	<ul style="list-style-type: none"><li>• Make sure the power cord is well connected.</li><li>• Make sure the safety lock 45 is installed.</li><li>• Reset the overloading protector 68.</li><li>• Check if the motor works well.</li><li>• Make sure the belt 61 on the motor 42 is fastening as always.</li><li>• If the belt is torn out, fasten it with the motor.</li><li>• Make sure the drum is not overloaded, and remove some of the materials if it's overloaded.</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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