

CENTRAL MACHINERY

®

MINI CEMENT MIXER 1.25 CU. FT.

Model 91907

ASSEMBLY AND OPERATING INSTRUCTIONS



Visit our website at: <http://www.harborfreight.com>



Read this material before using this product.

Failure to do so can result in serious injury.

SAVE THIS MANUAL.

Copyright© 2004 by Harbor Freight Tools®. All rights reserved. No portion of this manual or any artwork contained herein may be reproduced in any shape or form without the express written consent of Harbor Freight Tools. Diagrams within this manual may not be drawn proportionally. Due to continuing improvements, actual product may differ slightly from the product described herein. Tools required for assembly and service may not be included.

For technical questions or replacement parts, please call 1-800-444-3353.

PRODUCT SPECIFICATIONS

Item	Description
Drum Capacity	1.25 Cubic Feet
Drum Opening	10" Diameter
Motor	Input Power: 1/4 HP RPM: 1200 Voltage: 110 VAC at 60HZ
Overall Dimensions	45-1/2" x 21" x 42"
Weight	62 Lbs



SAVE THIS MANUAL

You will need this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures, parts list and assembly diagram. Keep your invoice with this manual. Write the invoice number on the inside of the front cover. Keep this manual and invoice in a safe and dry place for future reference.

GENERAL SAFETY WARNINGS AND PRECAUTIONS

- 1. Keep work area clean and dry.** Cluttered, damp, or wet work areas invite injuries.
- 2. Keep children away from work area.** Do not allow children to handle or climb on or in this product.
- 3. Store idle equipment.** When not in use, tools and equipment should be stored in a dry location to inhibit rust. Always lock up tools and equipment, and keep out of reach of children.
- 4. Do not use this product if under the influence of alcohol or drugs.** Read warning labels on prescriptions to determine if your judgement or reflexes are impaired while taking drugs. If there is any doubt, do not attempt to use this product.
- 5. Dress safely.** Do not wear loose clothing or jewelry, as they can become caught in moving parts. Wear a protective hair covering to prevent long hair from becoming caught in moving parts. If wearing a long-sleeve shirt, roll sleeves up above elbows.

6. **Do not overreach.** Keep proper footing and balance at all times to prevent tripping, falling, back injury, etcetera.
7. **Industrial applications must follow OSHA requirements.**
8. **Stay alert.** Watch what you are doing at all times. Use common sense. Do not use this product when you are tired or distracted from the job at hand.
9. **Check for damaged parts.** Before using this product, carefully check that it will operate properly and perform its intended function. Check for damaged parts and any other conditions that may affect the operation of this product. Replace or repair damaged or worn parts immediately.
10. **Replacement parts and accessories:** When servicing, use only identical replacement parts. Only use accessories intended for use with this product. Approved accessories are available from Harbor Freight Tools.
11. **Maintain this product with care.** Keep this product clean and dry for better and safer performance.
12. **Maintenance:** For your safety, service and maintenance should be performed regularly by a qualified technician.
13. **Use the right tool for the job.** Do not attempt to force a small tool or attachment to do the work of a larger industrial tool. There are certain applications for which this tool was designed. It will do the job better and more safely at the rate for which it was intended. Do not modify this tool, and do not use this tool for a purpose for which it was not intended.
14. **WARNING!** The warnings, precautions, and instructions discussed in this manual cannot cover all possible conditions and situations that may occur. The operator must understand that common sense and caution are factors, which cannot be built into this product, but must be supplied by the operator.

SPECIFIC PRODUCT WARNINGS AND PRECAUTIONS

1. **Maintain a safe working environment.** Keep the work area well lit. Make sure there is adequate surrounding workspace. Always keep the work area free of obstructions, grease, oil, trash, and other debris. Do not use the Cement Mixer in areas near flammable chemicals, dusts, and vapors.
2. **Always place the Cement Mixer on a solid, flat, level, surface that is capable of supporting the weight of the Mixer and its load.**

3. **Keep a safe clearance around the Cement Mixer.** Keep all people (except the operator) a minimum of six feet from the Mixer during operation.
4. **Keep all guards in place and in proper working condition.**
5. **Remove adjusting tools, shovels, hand trowels, etc.** Make sure all adjusting tools, shovels, hand trowels, and other tools and equipment are removed from the Cement Mixer prior to turning it on.
6. **Never stick your hands and/or tools into the Drum Assembly while the Cement Mixer is in operation.**
7. **Do not overload the Cement Mixer.** An overload may damage the equipment.
8. **Do not move the Cement Mixer during operation.** The Mixer could tip over or the Engine could be damaged.
9. **Use eye and hand protection.** Wear ANSI approved safety impact eye goggles and heavy-duty work gloves when using the Cement Mixer. ANSI approved safety impact eye goggles and heavy-duty work gloves are available from Harbor Freight Tools.
10. **Prolonged exposure to noise levels above 85 dBA is hazardous to hearing.** Always wear ANSI approved hearing protection when operating or working near the Cement Mixer while it is running. ANSI approved hearing protectors are available from Harbor Freight Tools.
11. **Prior to using the Cement Mixer, make sure you read and completely understand this instruction manual.**
12. **Keep the Cement Mixer and surrounding area clean at all times.**
13. **WARNING!** People with pacemakers should consult with their physician(s) before using this product. Operation of equipment in close proximity to a heart pacemaker could cause interference or failure of the pacemaker.

UNPACKING

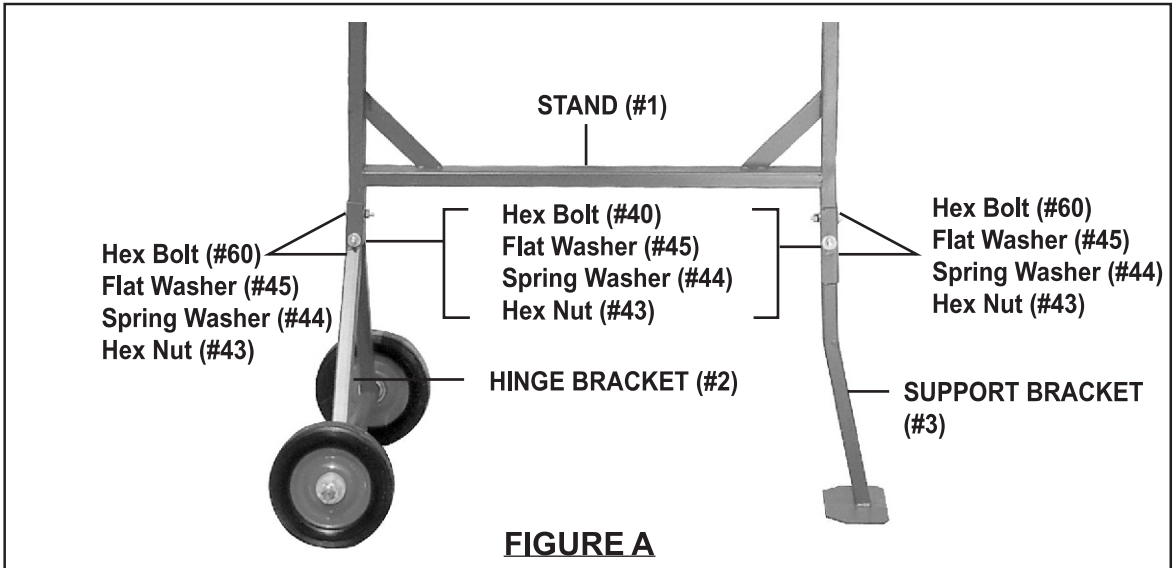
When unpacking, check to make sure that all components are included. Refer to the assembly drawing on the last page. If any parts are missing or broken, please call Harbor Freight Tools at the number shown on the cover of this manual as soon as possible.

ASSEMBLY INSTRUCTIONS

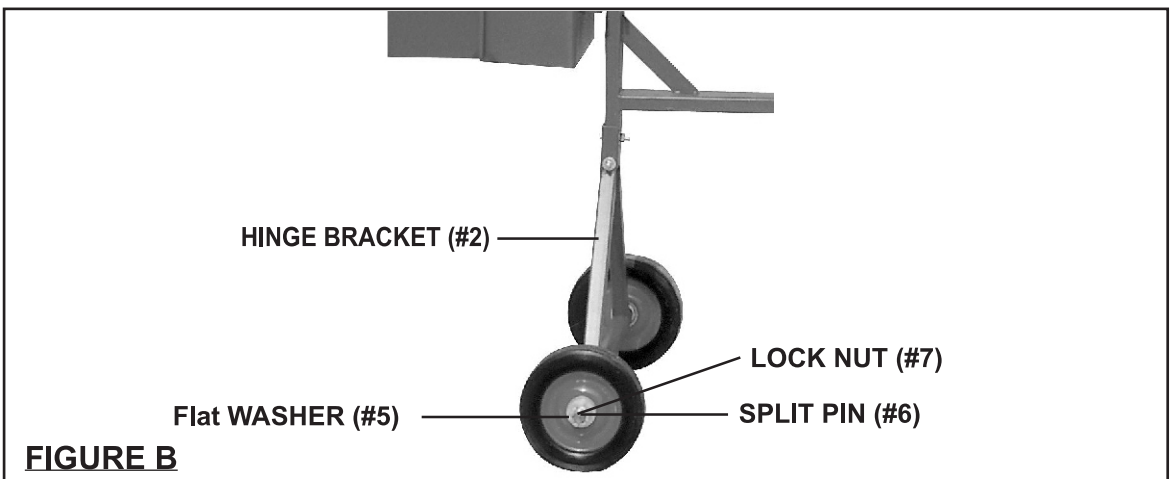
Assemble Stand (Recommend 2 people assist in assembly)

1. Place Stand (#1) into Hinge Bracket (#2) so that bolt holes line up as shown in Figure A. (Also see photo on cover page and Assembly Drawing on last page).

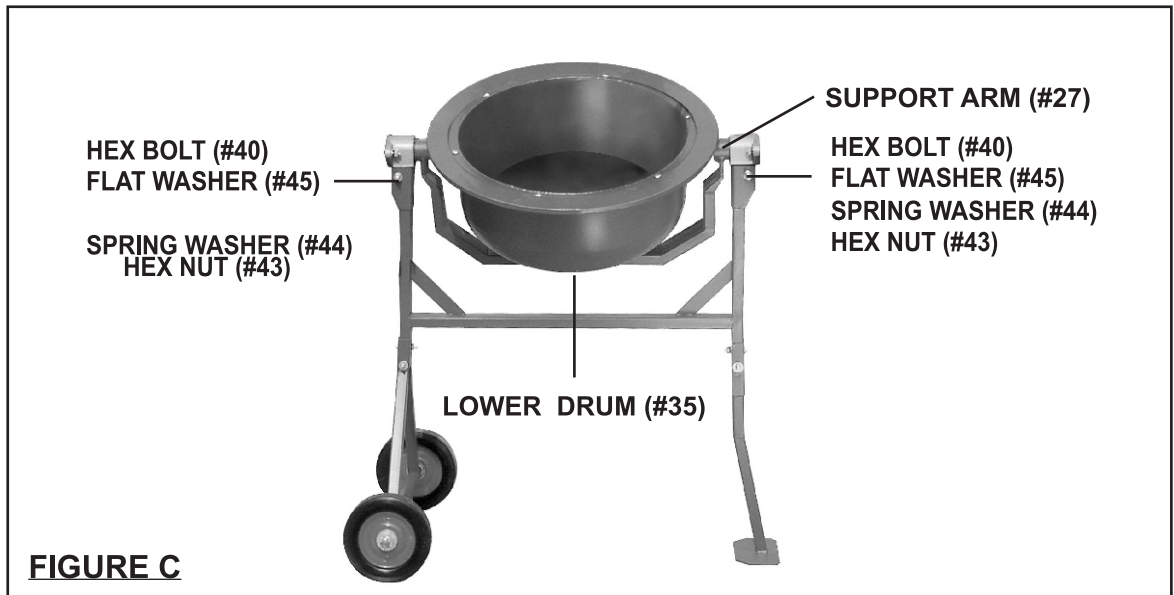
2. Insert Hex Bolts (#60 & #40) through holes from one side, then Flat Washer (#45) & Spring Washer (#44) and Hex Nut (#43) from the other side, and tighten with a wrench.
3. Insert Support Bracket (#3) onto Stand (#1) so that bolt holes line up.
4. Insert Hex Bolts (#60 & #40) through holes from one side, then Flat Washer (#45) & Spring Washer (#44) and Hex Nut (#43) from the other side, and tighten with a wrench.



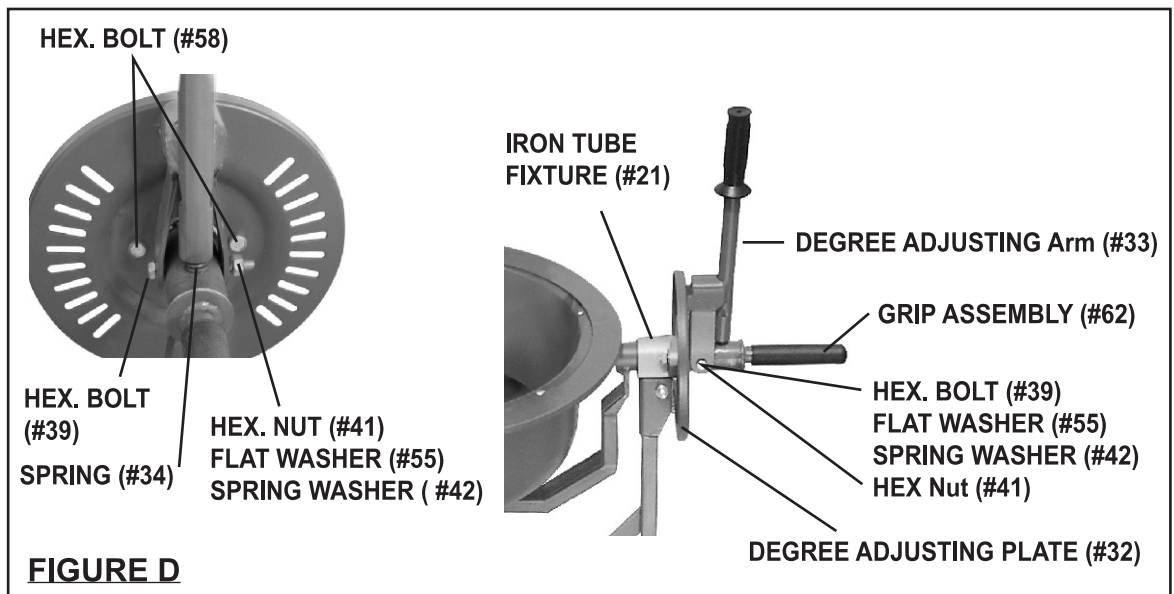
5. Secure Wheels (#4) in place using Flat Washer (#5) and Lock Nut (#7).
6. Insert Shaft Pins (#6) into the Hinge Bracket (2) axle holes, outside each Lock Nut (#7).



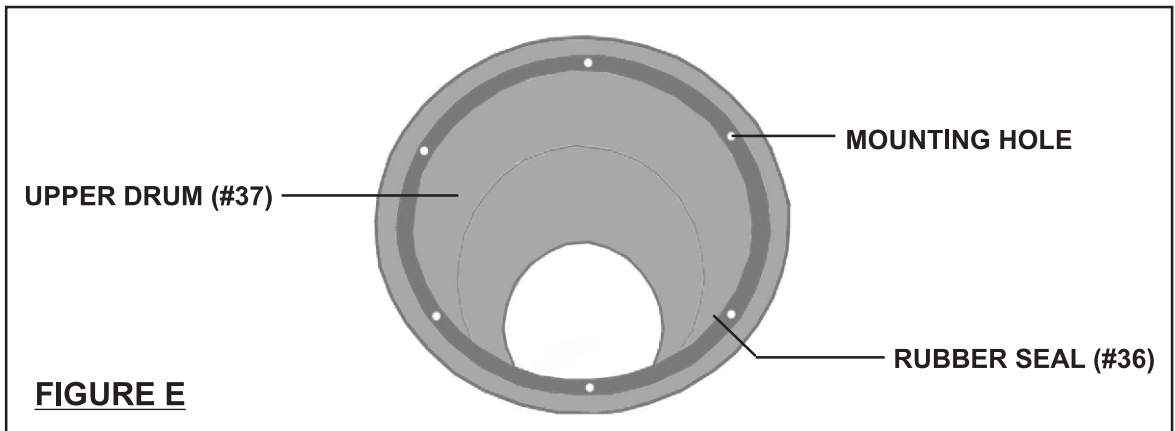
7. Bend each side of the Pins outward so they do not fall out.
8. With two people, set Lower Drum (#35) with attached Support Arm (#27) assembly into Stand assembly. See photo below.



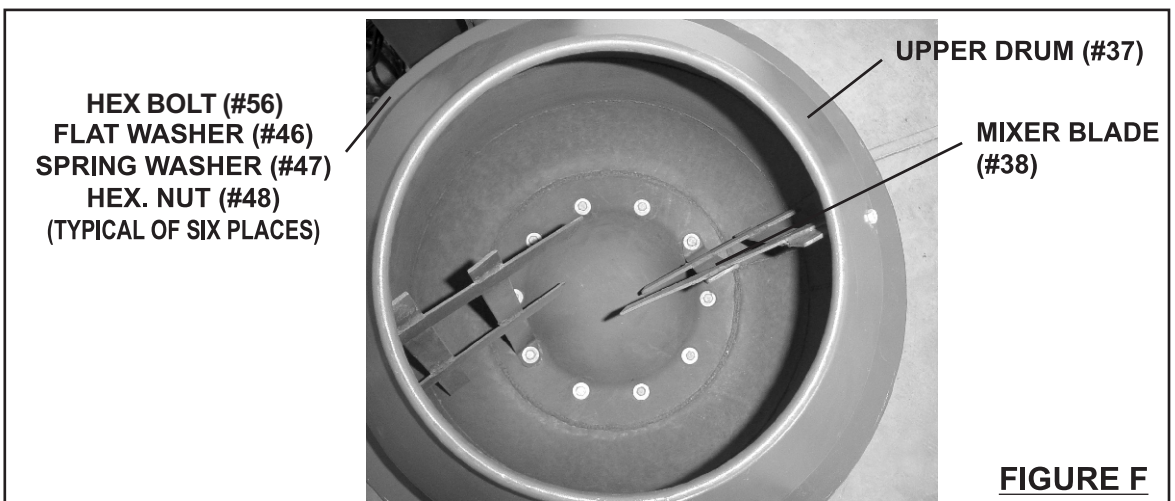
9. Insert Hex Bolts (#40) through holes from one side, then Flat Washer (#45) and Spring Washer (#44) and then Hex Nut (#43) from the other side, tighten with a wrench.
10. Mount Degree Adjusting Plate (#32) to Iron Tube Fixture (#21) using two Hex. Bolts (#58) from the outside. Secure from the inside with a Flat Washer (#45), Spring Washer (#44), then Hex. Nut (#43).



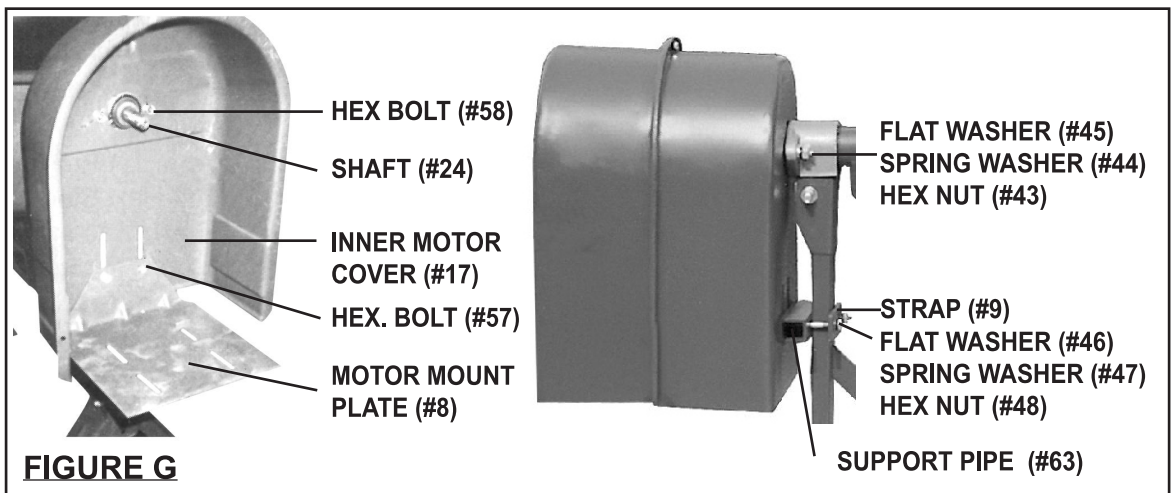
11. Attach Degree Adjust Arm (#33) to Iron Tube Fixture (#21) shaft as shown in Figure D.
 - a.) Insert Spring (#34) into lower hole of Degree Adjusting Arm (#33).
 - b.) Press down on Arm until holes align on the pivot shaft.
 - c.) Insert the Hex. Bolt (#39) and secure with Flat Washer (#55), Spring Washer (#42) and Hex Nut (#41).
 - d.) Tighten to a point where the Arm can still move.
12. Glue the Rubber Seal (#36) to the Upper Drum (#37) (glue not included) making sure that the holes in both align. The Rubber Seal must be flat on the Upper Drum (#37) to ensure a proper seal.



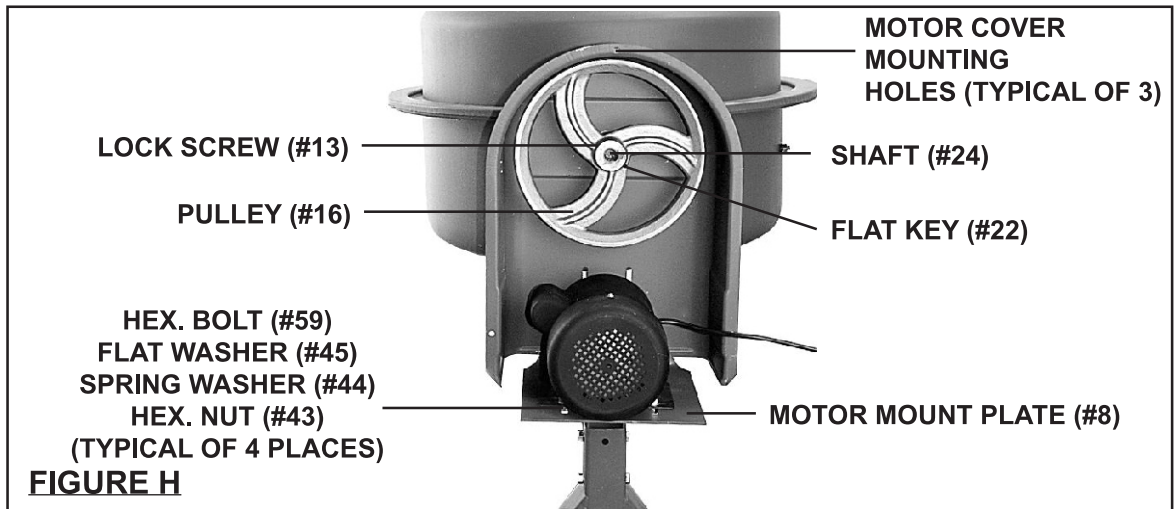
13. Place the Upper Drum (#37) on the Lower Drum (#35), making sure the mounting holes align in both.
14. Insert the six, Hex. Bolts (#56) into each mounting hole. Secure each Bolt with a Flat Washer (#46) and Spring Washer (#47) and Hex. Nut (#48).



15. **Note:** You will need the assistance of a second person for this step. Mount each Mixer Blade (#38) inside the assembled drum with the Blade angled about 10 degrees clockwise as shown in Figure F. Use the Cross-head bolt (#53), Leather Washer (#54), and Flat Washer (#46) Spring Washer (#47) and Hex Nut (#48) to secure each Mixer Blade (#38) to the upper and lower mounting holes.
16. Mount the inner Motor Cover (#17) to the Iron Tube Fixture (#21) using the Hex Bolt (#58), Flat Washer (#45), Spring Washer (#44) and Hex Nut (#43).



17. Attach the Motor Mount Plate (#8) to the Inner Motor Cover (#17) using the Hex. Bolt (#57), Flat Washer (#46), Spring Washer (#47) Hex. Nut (#48), and Strap (#9). Tighten sufficiently to hold in place. See photo above.
- Note:** Once the Motor (#12) is mounted, the Motor Mount Plate (#8) must be adjusted up or down to tighten the Belt.
18. Place the Motor (#12), attached to the power cable to the outer Motor Cover (#15), on top of the Motor Mount Plate (#8).
19. Secure the motor to the Motor Mount Plate (#8) using Hex. Bolt (#59), Flat Washer (#45) Spring Washer (#44), and Hex. Nut (#43). Tighten all four Hex. Nuts hand-tight. The Motor will be adjusted forward or backward later.
20. Squarely push Pulley (#16) center onto the shaft (#24) so that the groove in the pulley engages the Flat pin (#22). The Pulley (#16) should be flush with the step on the shaft.
- Caution:** Do not pound the Pulley onto the shaft. Damage can occur causing a loose fit.



21. Once the pulley is pushed in all the way, use an Allen wrench to tighten the Lock Screw (#13) on the side of the Pulley hub.
22. Install the pulley Belt (#18). Place Belt around Motor Pulley (#10), then over the Pulley (#16). Push the Motor inward until the Motor Pulley (#10) is directly under the Pulley (#16). Tighten the four Hex Bolts (#59) securing the Motor to the Motor Mount Plate (#8).
23. Push the Motor downward until the Belt tension is tight. This step may require tapping down the Strap (#9) behind the Inner Motor Cover (#17). Refer to the photo at the top of the previous page. When proper tension (1/4" deflection) is achieved, tighten the Hex. Nuts on the Strap (#9).
24. Check if Motor and belt turns true. Turn the Pulley (#16) by hand and verify that the Motor pulley does not rub against any other part, and that the pulleys turn true. make adjustments to Motor location as required.
25. Mount the Outer Motor Cover (#15) to the Inner Motor Cover (#17) using three Cross-Head Hex Bolts (#49) and Flat Washer (#46), Spring Washer (#47) and Hex Nuts (#48). Make sure that the power cord from the Motor to the Switch Assembly (#14) does not come in contact with moving parts.
26. The Cement Mixer assembly is complete. Go back and retighten all screws, nuts and bolts.

OPERATION

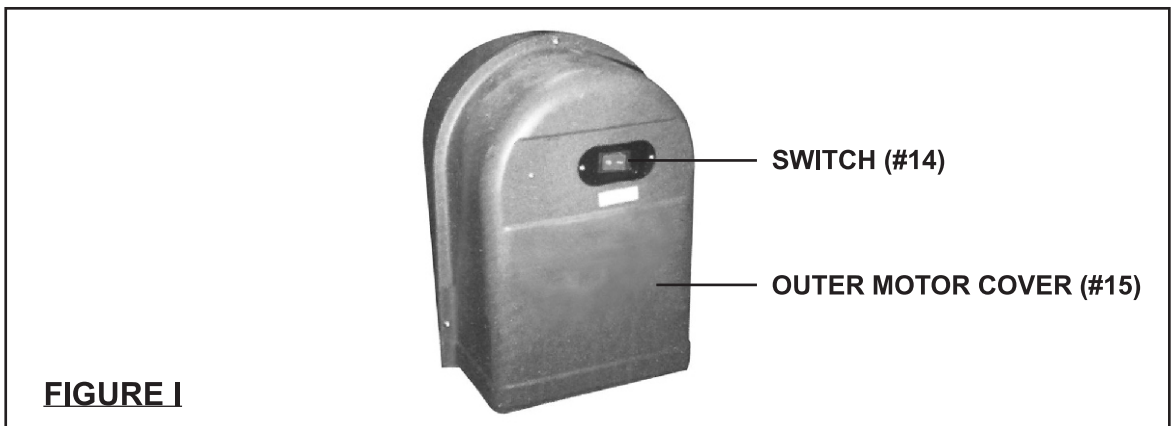
1. Place the Cement Mixer on a solid, even surface.
2. Connect the Power Cord to an electrical outlet (or properly rated extension cord) with a three prong receptacle.

3. Add material to the Drum. Typical maximum mixing quantities include: 3/4 gallons water, 1 shovel cement, 5 shovels aggregate rock using a size 3 shovel.

Warning: Do not attempt to move the Cement Mixer when it is full and / or in operation. It is unsafe to move the mixer while in this condition, and severe injury to personnel could occur.

4. Adjust the drum angle by pulling out on the Degree Adjusting Arm (#33), Disengaging the locking pins, and push on Arm until the desired angle is reached. Re-engage the locking pins.

5. Flip the Switch (#14) to the (I) or On position.



6. Filling and emptying the Drum is best done with the Drum Rotating.

Caution: Never leave the Cement Mixer running while unattended. Do not turn Mixer Off while full of cement.

7. When finished, flip the Switch to the (O) or Off position, and disconnect the Power Cord.

8. Turn the Drum angle as far down as possible to drain all fluids from Drum.

MAINTENANCE

1. After use, immediately wash out all debris from the inside and outside of the Cement Mixer. Make sure the Power Cord is disconnected.

2. Do not apply water in or around the Motor Base Cover.

3. Retighten belt after the first 25 hours of use. The belt should be able to be pressed in no more than 1/4 inch.

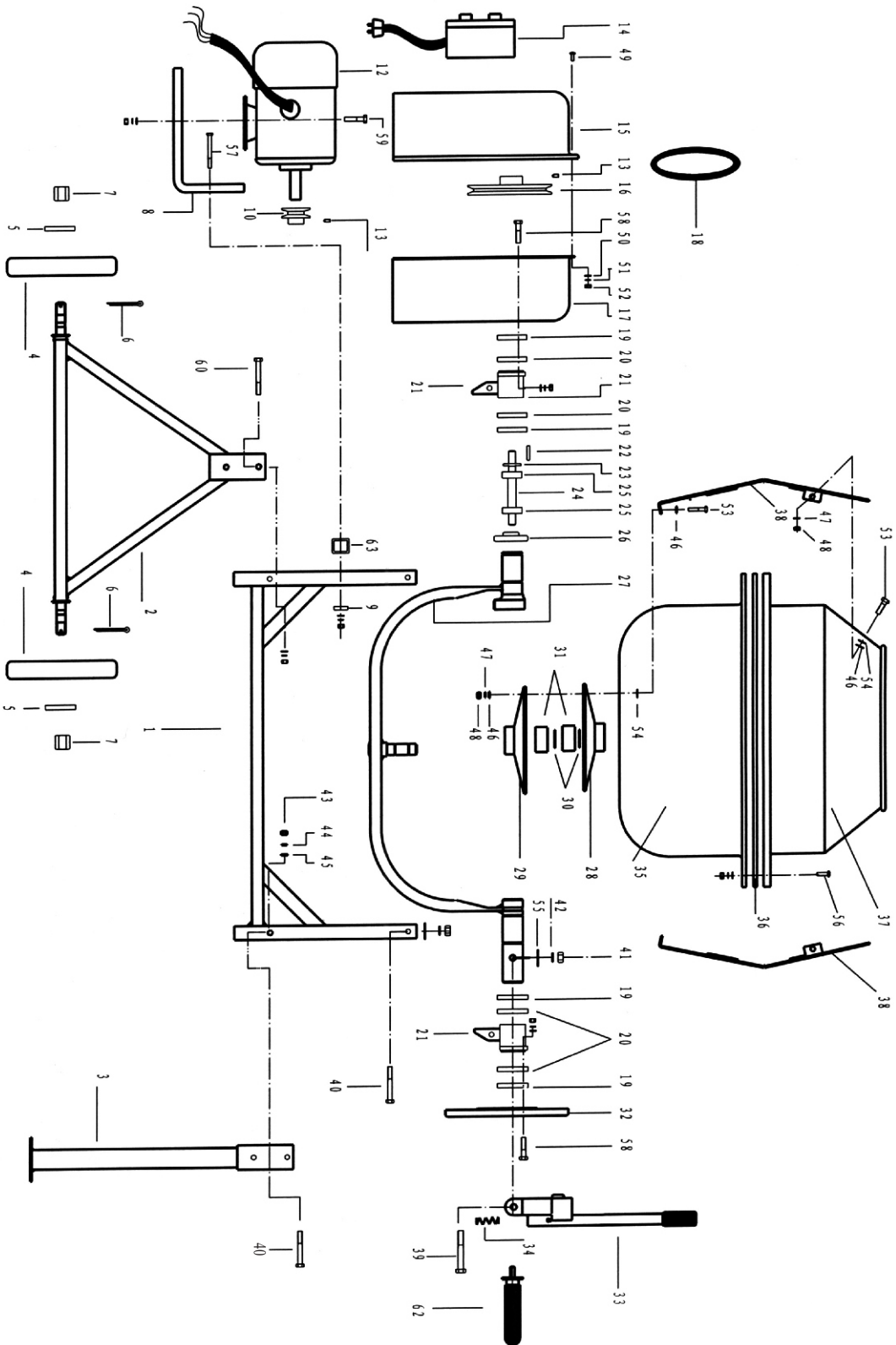
4. Periodically recheck all nuts, bolts, and screws for tightness.

5. When not in use, locate the Mini Cement Mixer in a safe, secure area that has no child accessibility.

Parts List for Mini Cement Mixer 1.25 Cu. Ft.

Item#	Description	Qty	Item#	Description	Qty
1	Stand	1	32	Degree Adjusting Plate	1
2	Hinge Bracket	1	33	Degree Adjusting Arm	1
3	Support Bracket	1	34	Spring	1
4	Wheel	2	35	Lower Drum	1
5	Flat Washer	2	36	Rubber Seal	1
6	Shaft Pin Ø3 x 30	2	37	Upper Drum	1
7	Lock Nut M16 x 1.5	2	38	Mixer Blade	2
8	Motor Mount Plate	1	39	Hex Bolt M10 x 65	1
9	Strap	1	40	Hex Bolt M8 x 60	4
10	Motor Pulley	1	41	Hex Nut M10	1
			42	Spring Washer Ø10	1
12	Motor	1	43	Hex Nut M8	14
13	Lock Screw M8 x 8	2	44	Spring Washer Ø8	14
14	Switch Assembly	1	45	Flat Washer Ø8	14
15	Outer Motor Cover	1	46	Flat Washer Ø6	12
16	Pulley	1	47	Spring Washer Ø6	12
17	Inner Motor Cover	1	48	Hex Nut M6	12
18	Pulley Belt A560mm	1	49	Cross-Head Bolt M5 x 10	3
19	Shaft Pin Ø38	4	50	Flat Washer Ø5	3
20	Adjusting Washer	4	51	Spring Washer Ø5	3
21	Iron Tube Fixture	2	52	Hex Nut M5	3
22	Flat Key 5 x 35	1	53	Cross-Head Bolt M6 x 25	4
23	Dust Cover	1	54	Leather Washer Ø5	4
24	Shaft	1	55	Flat Washer Ø10	1
25	Bearing 6002-2RS	2	56	Hex Bolt M6 x 18	6
26	Gear	1	57	Hex Bolt M6 x 50	2
27	Support Arm Assembly	1	58	Hex Bolt M8 x 25	4
28	Bearing Cover, Upper	1	59	Hex Bolt M8 x 20	4
29	Bearing Cover, Lower	1	60	Hex Bolt M8 x 40	2
30	Shaft Pin Ø20	2			
31	Bearing 6204-2RS	2	62	Grip Assembly	1
			63	Support Pipe	1

Assembly Drawing



LIMITED 1 YEAR / 90 DAY WARRANTY

Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that for a period of ninety days from date of purchase that the engine/motor, the belts (if so equipped), and the blades (if so equipped) are free of defects in materials and workmanship. Harbor Freight Tools also warrants to the original purchaser, for a period of one year from date of purchase, that all other parts and components of the product are free from defects in materials and workmanship (90 days if used by a professional contractor or if used as rental equipment). This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

3491 Mission Oaks Blvd. • PO Box 6009 • Camarillo, CA 93011 • (800) 444-3353

PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.