Portable Cement Mixer

3.5 Cubic Feet

Listed 1/3 H.P. Electric Motor

Specifications

ITEM	DESCRIPTION
Drum Capacity	3.5 Cubic Foot
Drum Opening	15 Inches
Motor	Input Power: 1/2 HP; Output Power: 1/3 HP RPM: 1520 Voltage: 110 VAC at 60 Hz.
Overall Dimensions	43(L) × 25(W) × 49.5(H)Inches
Base Dimensions	48 × 32Inches
Shipping Weight	132 Lbs.

Save This Manual

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

Safety Warnings and Precautions

WARNING: When using tool, basic safety precautions should always be followed to reduce the risk of personal injury and damage to equipment.

Read all instructions before using this tool!

1. **keep work area clean.** cluttered areas invite injuries.

2. **Observe work area conditions.** Do not use machines or power tools in damp or wet locations. Don't expose to rain. Keep work area well lighted. Do not use electrically powered tools in the presence of flammable gases or liquids.

3. **Keep children away.** Children must never be allowed in the work area. Do not let them handle machines, tools,or extension cords.

4. **Store idle equipmunt.** When not in use tools must be stored in a dry location to inhibit rust. Always lock up tools and keep out of reach of children.

5. **Do not force tool.** It will do the job better and more safely at the rate for which it was intended. Do not use inappropriate attachments in an attempt to exceed the tool capacity.

6. **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. Do not use a tool for a purpose for which it was not intended.

7. **Dress properly.** Do not wear loose clothing or jewelry as they can be caught in moving parts. Protective electrically non-conductive clothes and non-skid footwear are recommended when woking. Wear restrictive hair covering to contain long hair.

8. **Use eye and ear protection.** Always wear ANSI approved impact safety goggles. Wear a full face shield if you are producing metal filings or wood chips. Wear an ANSI approved dust mask or respirator when working around metal, wood, and chemical dusts and mists.

9. **Do not overreach.** Keep proper footing and balance at all times. Do not reach over or across running machines.

10. **Maintain tools with care.** Keep tools sharp and clean for better and safer penormance. Follow instructions for lubricating and changing accessories. Inspect tool cords periodically and, if damaged, have them repaired by an authorized technician. The handles must be kept clean, dry, and free from oil and grease at all times.

11. **Disconnect power.** Unplug when not in use, or when cleaning, lubricating, or adjusting the mixer.

12. **Remove adjusting keys and wrenches.** Check that keys and adjusting wrenches are removed from the tool or machine work surface before plugging it in.

13. **Avoid unintentional starting.** Be sure the switch is in the Off position when not in use and before plugging in.

14. **Stay alert.** Watch what you are doing, use common sense. Do not operate any tool when you are tired.

15. **Check for damaged parts.** Before using any tool, any part that appears damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment and binding of moving parts; any broken parts or mounting fixtures; and any other condition that may affect proper operation. Any part that is damaged should be properly repaired or replaced by a qualified technician. Do not use the tool if any switch does not turn On and Off properly.

16. **Guard against electric shock.** Prevent body contact with grounded surfaces such as pipes, radiators, ranges, and refrigerator enclosures.

17. **Replacement parts and accessories.** When servicing, use only identical replacement parts. Use of any other parts will void the warranty. Only use accessories intended for use with this tool. Approved accessories are available from Harbor Freight Tools.

18. **Keep safe clearance around mixer.** Keep all persons (except operator) a minimum of six feet from the mixer during operation.

19. **Do not overload mixer.** An overload could damage equipment.

20. **Do not move mixer during operation.** The mixer could tip over or the motor could be damaged.

21. **Do not operate tool if under the influence of alcohol or drugs.** Read warning labels on prescriptions to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt, do not operate the tool.

Note: Performance of this tool may vary depending on variations in local line voltage.Extension cord usage may also affect tool performance.

Warning: The warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

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 on the cover of this manual as soon as possible.

Assembly

Assemble Stand

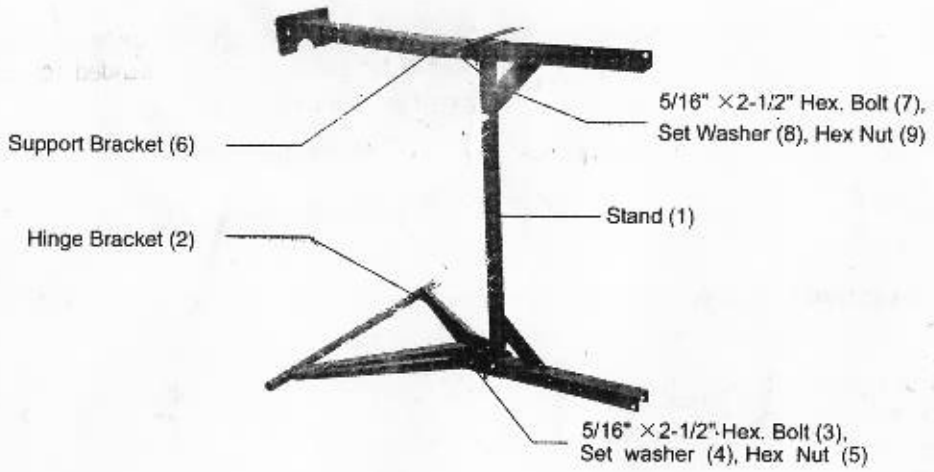
1. Place Stand (1) into Hinge Bracket (2) so that bolt holes line up as shown in photo below (stand is shown on its side for ease of assembly). (Also see photo on cover page and Assembly Drawing on last page).

2. Insert Hex Bolts (3) through holes from one side, then Set Washer (4) and Hex Nut (5) from the otner side,and tighten with a wrench.

3. Insert Support Bracket (6) onto Stand (1) so that bolt holes line up.

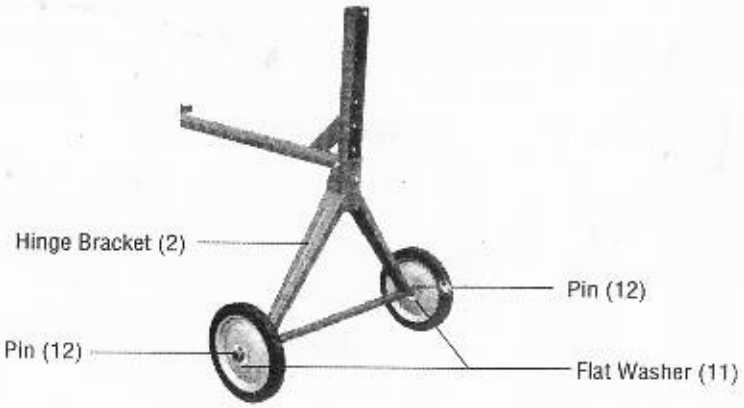
4. Insert Hex Bolts (7) through holes from one side, then Set Washer (8) and Hex Nut (9) from the other side,and tighten with a wrench.

5. Place Stand upright as shown in the photo on the next page.



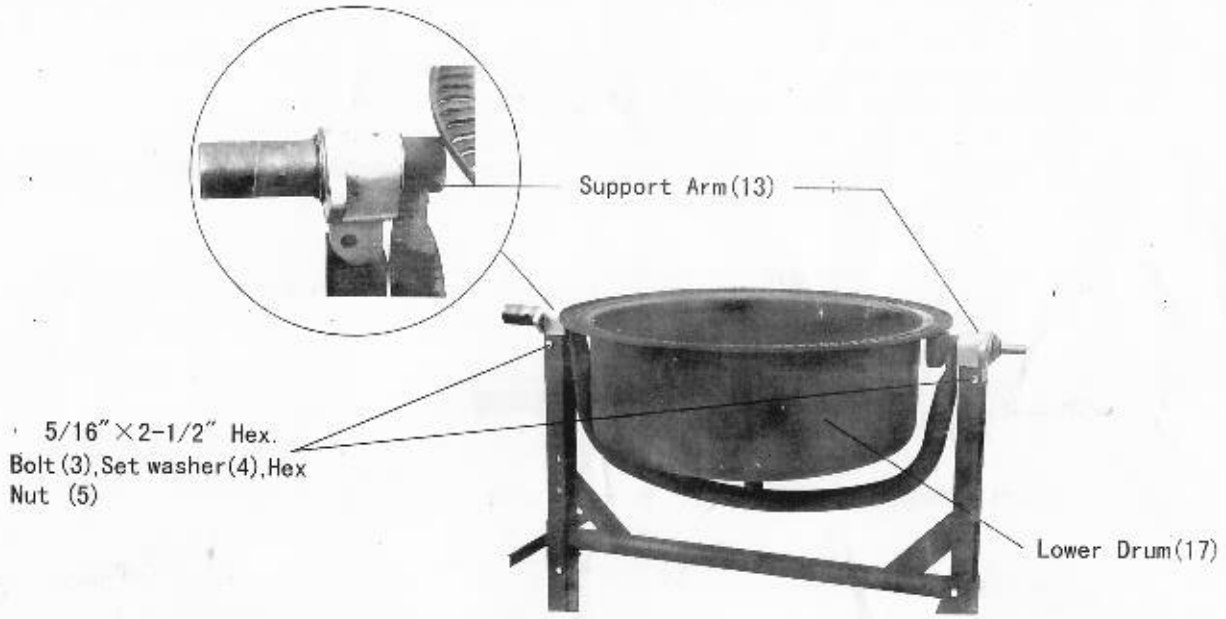
6. Place Flat Washer (11) onto Hinge Bracket axle, then the Wheel (10), and another Flat Washer.

7. Insert (split) Pins (12) into the Hinge Bracket (2) axle holes, outside each Flat Washer. That is, each washer should be touching the wheel, not the pin.



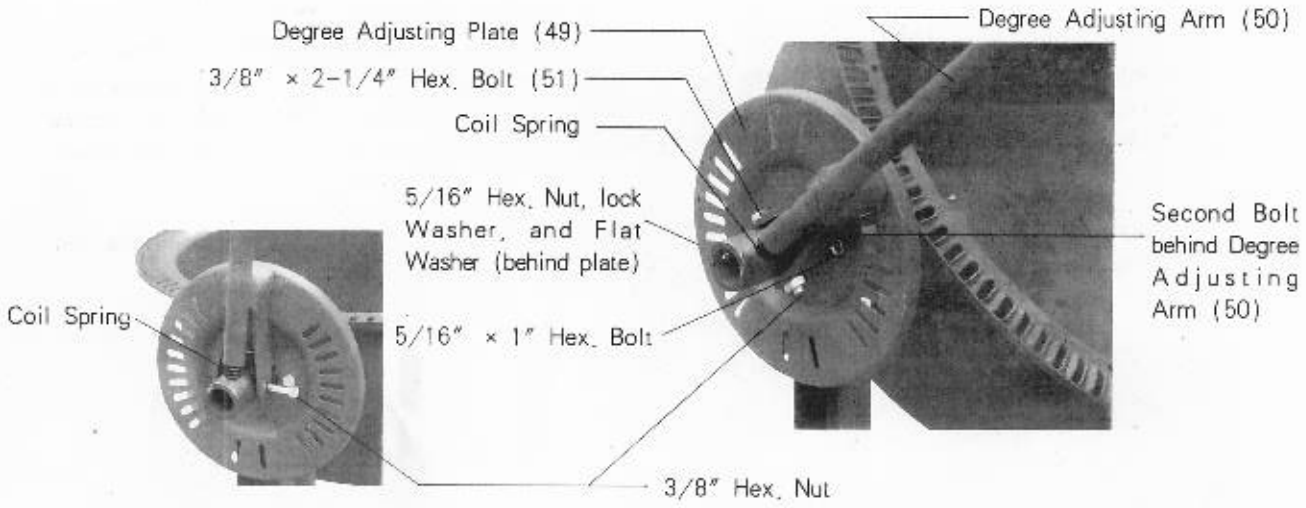
8. Bend each side of the Pins outward so they do not fall out.

9. With two people, set the Lower Drum (17) with attached Support Arm (13) assembly into Stand assembly. See photo below.



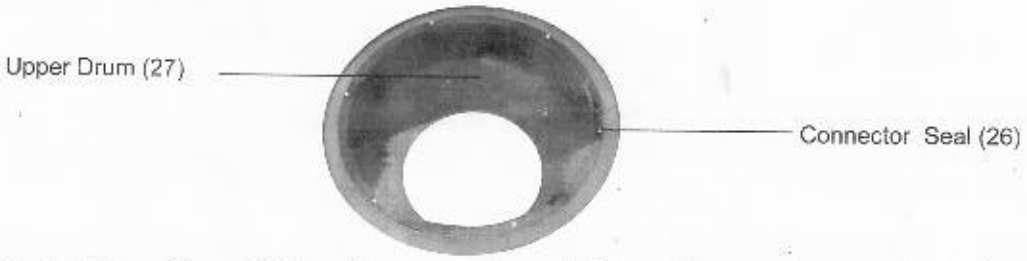
10. Insert Hex Bolts (3) through holes from one side, then Set Washer (4) and Hex Nut (5) from the other side, and tighten with a wrench.

11. Mount Degree Adjusting Plate (49) to Iron Tube-R.H. (15) using two Hex. Bolts from the outside. Secure from the inside with a Flat Washer, lock Washer then Hex. Nut.



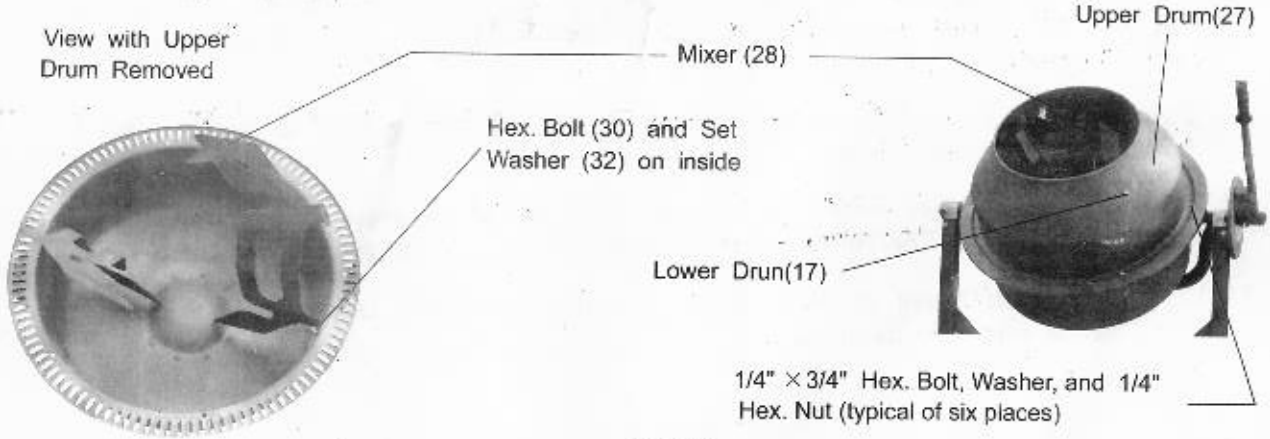
12. Attach Degree Adjusting Arm (50) to Iron Tube-R.H. (15) shaft as shown above. a.) Insert Coil Spring into lower hole of Degree Adjusting Arm. b.) Press down on Arm until holes align on the pivot shaft. c.) Insert the 3/8" × 2-1/4" Hex. Bolt (51) and secure with 3/8" Hex. Nut. d.) Tighten to a point where the Arm can still move. e.) Place a Locking Hex. Bolt next to the Hex. Stud and secure.

13. Glue the Connector Seal (26) to the Upper Drum (27), making sure that the holes in both align. The Connector Seal must be flat on the Upper Drum to ensure a proper seal.



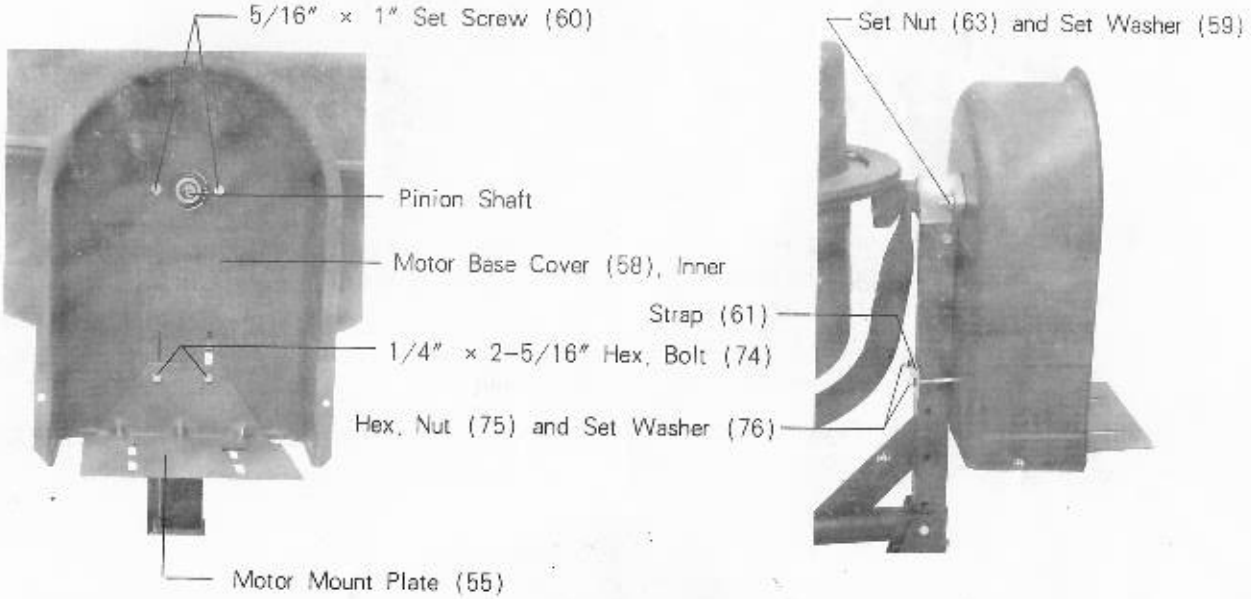
14. Place the Upper Drum (27) on the Lower Drum (17), making sure the mounting holes align in both.

15. Insert the six, 5/16" × 3/4" Hex. Bolts into each mounting hole. Inside the Drum, secure each Bolt with a Washer and 5/16" Hex. Nut.



16. Mount each Mixer (28) inside the assembled drum with the pointed end facing downward (See photo at bottom of previous page). Also, the V-shaped bend in the Mixers should pointed in the direction of the Drum rotation (clockwise). Use the 1/4" x 3/4" Hex. Screw (33), Set Washer (32), and Hex. Nut (30) to secure each Mixer to the upper and lower mounting holes.

17. Mount the inner Motor Base Cover (58) to the Iron Tube-L.H. (14) bearing using the Set Screw (60), Set Washer (59), and Set Nut (63).



18. Attach the Motor Mount Plate (55) to the inner Motor Base Cover (58) using the Hex. Bolt (74), Set Washer (76), Hex. Nut (75), and Strap (61). Tighten sufficiently to hold in place. See photo above.

> **Note:** Once the Motor (52) is mounted, the Motor Mount Plate must be adjusted up or down to tighten the Belt (68).

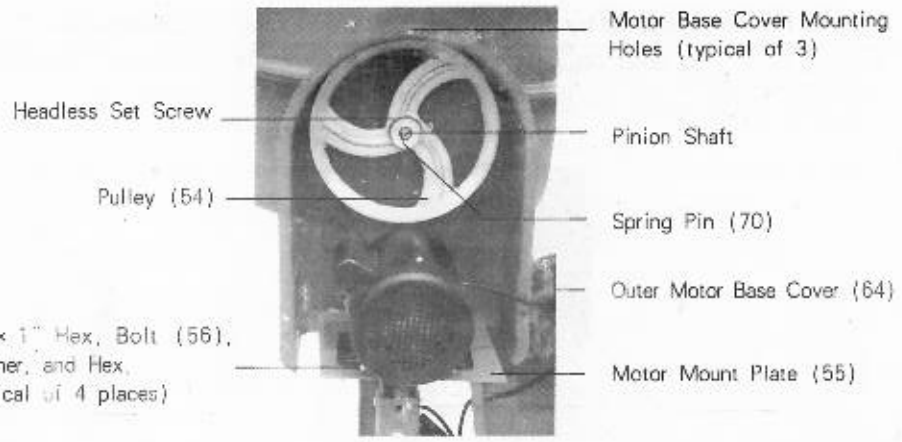
19. Place the Motor (52), attached by power cable to the outer Motor Base Cover (64), on top of the Motor Mount Plate (55). Refer to the photo on the top of the next page.

20. Secure the Motor to the Motor Mount Plate using 5/16" x 1" Hex. Bolt (56), Set Washer, and Hex. Nut. Tighten all four Hex. Nuts hand-tight. The Motor will be adjusted forward or backward later.

21. Clean the pinion shaft of all plastic protective material and other debris. Also clean out debris from Pulley (54) center hole.

22. Squarely push belt Pulley center onto the pinion shaft so that the groove in the pulley engages the Spring Pin (70). The Pulley should be flush with the step on the pinion shaft.

> **Caution:** Do not pound the Pulley onto the pinion shaft. Damage can occur causing a loose fit.



23. Once the Pulley is pushed in all the way, use an Allen wrench to tighten the Headless Set Screw on the side of the Pulley hub.

24. Install the pulley Belt (68). Place Belt around Motor drive pulley, then over the belt Pulley (54). Push the Motor inward until the drive pulley is directly under the belt Pulley. Tighten the four Bolts securing the Motor to the Motor Mount Plate.

25. Push the Motor downward until the Belt tension is tight. This step may require tapping down the Strap (61) behind the Inner Motor Base Cover (58). Refer to the photo at the top of the previous page. When proper tension is achieved, tighten the Hex. Nuts on the Strap (61).

26. Check if Motor and belt turns true. Hand turn the belt Pulley and verify that the Motor drive pulley and belt pulley does not rub against any other part, and that the pulleys turn true. Make adjustments to Motor location as required.

27. Mount the Outer Motor Base Cover (64) to the inner Motor Base Cover (58) using three 5/16" x 1" Set Screws (65) and 5/16" Nuts. Make sure that the power cord from the Motor to the Switch (71) does not come in contact with moving parts.

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

Operation

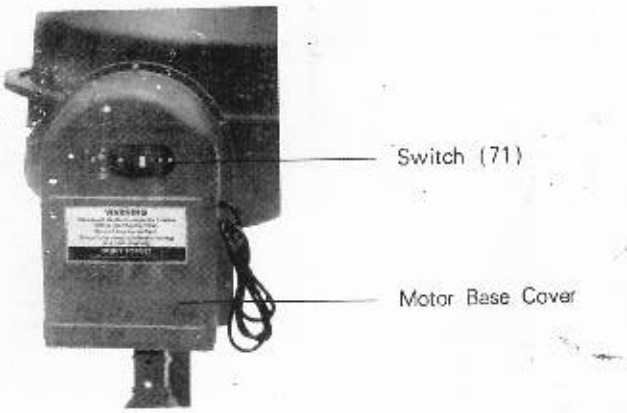
1. Place the Cement Mixer on a solid, even surface.

2. Connect the Power Cord (72) to an electrical outlet (or properly rated extension cord) with a third, ground prong.

3. Add material to the Drum. Typical maximum quantities include: 2 gallons water 3 shovels cement, 15 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. Injury to personnel could occur.

4. Adjust the Drum angle by pulling out on the Degree Adjusting Arm (50), disengaging the locking pins, and push on Arm until the desired angle is reached. Reengage the locking pins.
5. Flip the Switch (71) to the (1) or On position.



5. 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.

6. When finished, flip the Switch to the (o) or Off position, and disconnect the Power Cord.
7. 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 that 1/4 inch.
4. Periodically recheck all nuts, bolts, and screws for tightness.

Item#	Description	Qty
1	Stand	1
2	Hinge Bracket	1
3	Hex.Bolt	6
4	Set Washer	6
5	Hex.Nut	6
6	Support Bracket	1
7	Hex.Bolt	3
8	Set Washer	3
9	Hex.Nut	3
10	Wheel	2
11	Flat Washer	4
12	Pin	2
13	Support Arm	1
14	Iron Tube (L.H.)	1
15	Iron Tube (R.H.)	1
16	Shaft Assembly	1
17	Drum, Lower	1
18	Washer Cover, Lower	1
19	Ball Bearing	2
20	Washer Cover,Upper	1
21	Shaft	1
22	Ball Bearing	2
23	Bearing Shell	2
24	Flat Washer	1
25	Gear	1
26	Connector Seal	1
27	Drum,Upper	1
28	Mixer	2
29	Set Washer	2
30	Hex.Nut	2
31	Set Screw	2
32	Set Washer	2
33	Hex. Screw	2
34	Set Washer	2
35	Hex. Nut	2
36	C-clip	2

Item#	Description	Qty
37	Iron Tube Fixture(L.H.)	1
38	Iron Tube Fixture(R.H)	1
39	Set Washer	4
40	Set Nut	4
41	Flat Washer	2
42	Flat Washer	1
43	Pulley (L)	1
46	Hex.Nut	1
47	Flat Washer	2
48	C-clip	2
49	Degree Adjusting Plate	1
50	Degree Adjusting Arm	1
51	Hex.Bolt	1
52	Motor	1
53	Key	1
54	Pulley(s)	1
55	Motor Mount Plate	1
56	Hex.Bolt	4
58	Motor Base Cover,Inner	1
59	Set Washer	2
60	Set Screw	2
61	Strap	1
62	Set Washer	1
63	Set Nut	2
64	Motor Base Cover,Outer	1
65	Set Screw	3
66	Set Washer	3
67	Set Nut	3
68	Belt	1
69	Key	1
70	Spring Pin	1
71	Switch	1
72	Power Cord	1
73	Coil Spring	1
74	Hex.Bolt	2
75	Hex.Nut	2
76	Set Washer	2

Assembly Drawing