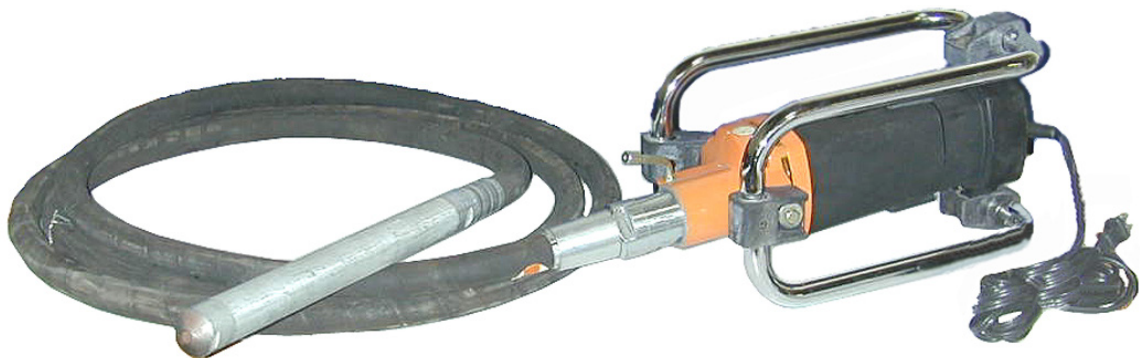


CHICAGO
Electric® Power Tools

CONCRETE VIBRATOR MOTOR WITH FRAME

Model 42947

ASSEMBLY AND OPERATING INSTRUCTIONS



Distributed Exclusively by Harbor Freight Tools®.

3491 Mission Oaks Blvd., Camarillo, CA 93011
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For technical questions and replacement parts, please call 1-800-444-

Specifications

Motor	4000 RPM; 2.2 HP; coated windings; thermo protection
Power Requirement	110 Volt, 60 Hz, 15 amp
Shaft	Counterclockwise Rotation; sealed bearings
Vibrator Head and Hose	1.437 (Dia.) x 18 feet, 5 inches (L) Center Shaft: 0.497 inches Connector ID: 1.497 inches Hose: 1.157 (Dia.) inches
Line Cord	13 feet; wire: 16 AWG, 2-prong grounded plug, UL listed
Motor and Frame Weight	16 lb.
Vibrator Head and Hose	27 lb.

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 equipment.** 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. There are certain applications for which this tool was designed. Do not modify this tool and do not use this 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 working. 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 a NIOSH-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 performance. Inspect tool cords periodically and, if damaged, have them repaired by a qualified technician.
11. **Disconnect power.** Unplug motor when not in use.
12. **Avoid unintentional starting.** Be sure the switch is in the Off position when not in use and before plugging in. Do not carry any tool with the unit plugged in.
13. **Stay alert.** Watch what you are doing, use common sense. Do not operate any tool when you are tired.
14. **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.
15. **Guard against electric shock.** Prevent body contact with grounded surfaces such as pipes, radiators, ranges, and refrigerator enclosures.
16. **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.
17. **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.
18. **Use proper size and type extension cord.** If an extension cord is required, it must be of the proper size and type to supply the correct current to the tool without heating up. Otherwise, the extension cord could melt and catch fire, or cause electrical damage to the tool. This tool requires use of an extension cord of **0 to 15 amps** capability (up to 50 feet), with wire size rated at **16 AWG**. Longer extension cords require larger size wire. If you are using the tool outdoors, use an extension cord rated for outdoor use (signified by "WA" on the jacket).
19. **Maintenance.** For your safety, service and maintenance should be performed regularly by a qualified technician.

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.

VIBRATION HAZARD

This tool vibrates during use. Repeated or long-term exposure to vibration may cause temporary or permanent physical injury, particularly to the hands, arms and shoulders. To reduce the risk of vibration-related injury:

1. Anyone using vibrating tools regularly or for an extended period should first be examined by a doctor and then have regular medical check-ups to ensure medical problems are not being caused or worsened from use. Pregnant women or people who have impaired blood circulation to the hand, past hand injuries, nervous system disorders, diabetes, or Raynaud's Disease should not use this tool. If you feel any medical or physical symptoms related to vibration (such as tingling, numbness, and white or blue fingers), seek medical advice as soon as possible.
2. Do not smoke during use. Nicotine reduces the blood supply to the hands and fingers, increasing the risk of vibration-related injury.
3. Wear suitable gloves to reduce the vibration effects on the user.
4. Use tools with the lowest vibration when there is a choice between different processes.
5. Include vibration-free periods each day of work.
6. Grip tool as lightly as possible (while still keeping safe control of it). Let the tool do the work.
7. To reduce vibration, maintain the tool as explained in this manual. If any abnormal vibration occurs, stop use immediately.

Unpacking

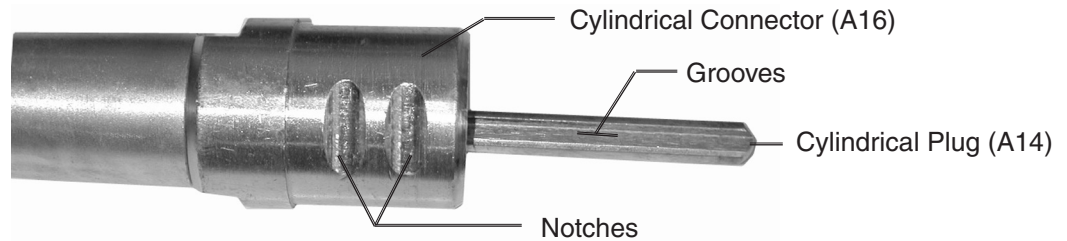
When unpacking, check to make sure the following parts are included:

- Vibrator Motor Assembly
- Vibrator Head with Flexible Pipe Assembly

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

1. Guide the Cylindrical Plug (A14) into the Gear Box so that its grooves align inside.



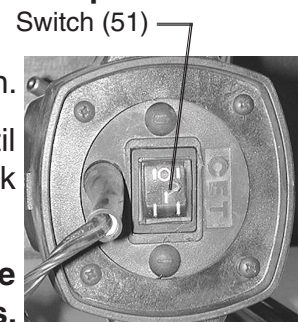
2. Then, push the Cylindrical Connector all the way in the Gear Box while aligning its notches to meet the Connecting Spanner (1).
3. Turn the Spanner until it locks the Cylindrical Connector in place.

Operation

1. Connect the Plug (19) to an electrical outlet or extension cord.
If using an extension cord, refer to the Safety Precaution #18 on page 3.
2. Carry the Vibrator Motor by the Supporting Bracket (8) and the Vibrator Head with Flexible Pipe to where the cement is being poured. Place it in a dry area, away from water and the concrete.

CAUTION: Never carry the Vibrator Motor suspended from the Flexible Pipe. This could damage the Gear Box or Cylindrical Connector.

3. After pouring the concrete, press the Switch (51) to the ON position.
The Vibrator Head should begin to move. If it does not, tap it until the vibration starts. If it still does not, turn the unit OFF and recheck electrical and mechanical connections.



WARNING: Never let wet concrete or water come in contact with the Motor. This could cause an electric shock to the operator, viewers, or cause damage to the Motor.

4. Insert the Vibrator Head with Flexible Pipe Assembly into the concrete.
5. Move the Vibrator Head up and down in the concrete to remove air bubbles.

Caution: Never allow concrete to enter the Vibrator Head Assembly. This could damage the bearing inside the Head.

6. When finished, press the Switch to the OFF position and unplug the unit from the electrical outlet.
7. Immediately wash down the Vibrator Head and Flexible Pipe with clean water. Wipe dry with a clean cloth.

Be careful not to wet the Vibrator Motor Assembly during cleaning.

Maintenance

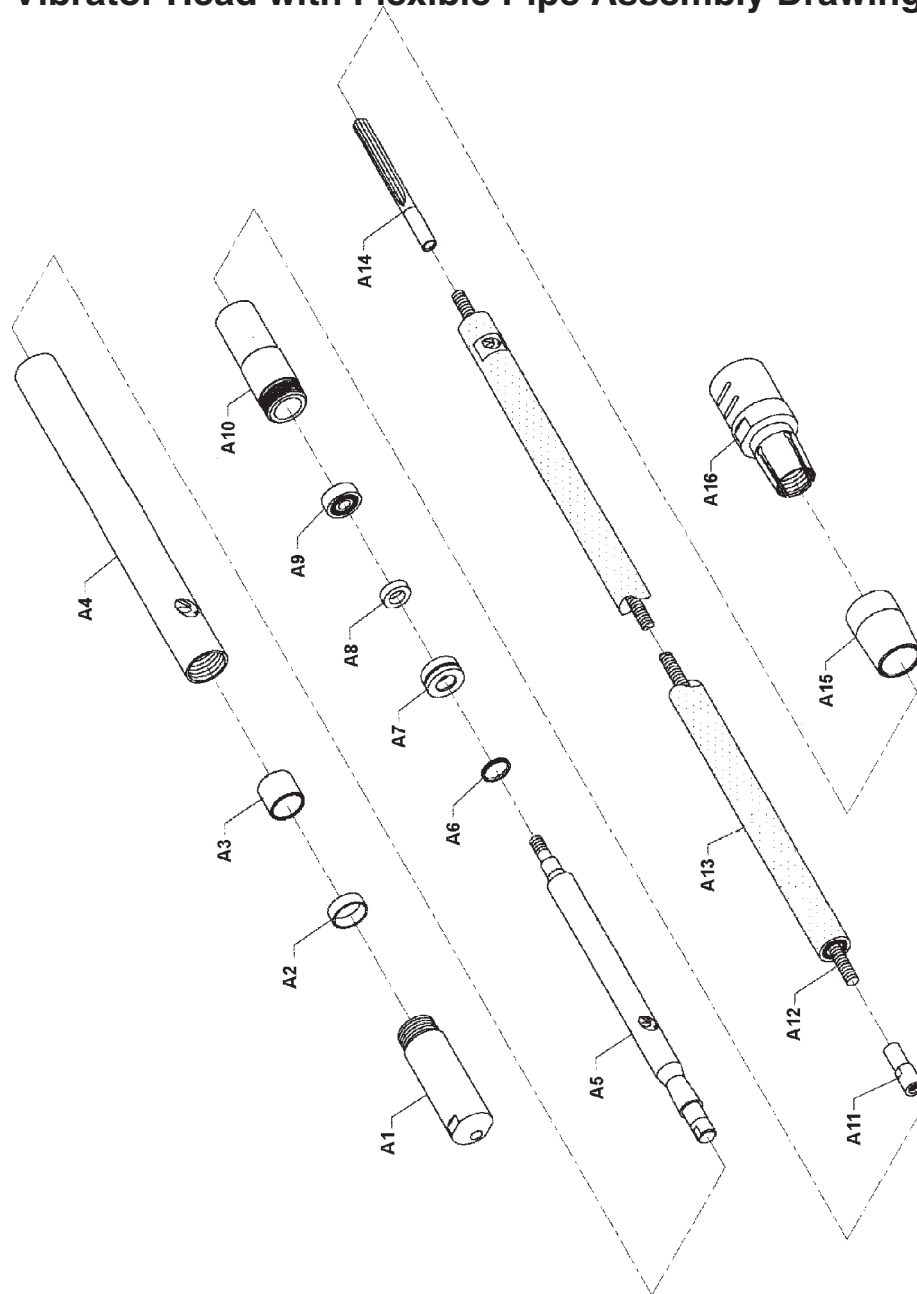
1. Clean all components with a damp cloth after every use. Remove all concrete residue.
2. After more than 100 hours of use, the Vibrating Head Assembly and Flexible Pipe Assembly may require cleaning and lubrication. This should only be done by a qualified technician.

Vibrator Head with Flexible Pipe Parts List

Item	Description	Qty
A1	Cone	1
A2	Spacer	1
A3	Raceway	1
A4	Casing	1
A5	Rolling Body	1
A6	Oil Seal Ring, 24 x 2.4	1
A7	Oil Seal Housing	1
A8	Oil Seal, PD 14 x 24 x 7	1

Item	Description	Qty
A9	Bearing, 202U	1
A10	Pipe Adaptor	1
A11	Shaft Adaptor	1
A12	Flexible Shaft	1
A13	Flexible Pipe	1
A14	Cylindrical Plug	1
A15	Conical Sleeve	1
A16	Cylindrical Connector	1

Vibrator Head with Flexible Pipe Assembly Drawing



NOTE: Some parts are listed and shown for illustration purposes only and are not available individually as replacement parts.

PLEASE READ THE FOLLOWING CAREFULLY

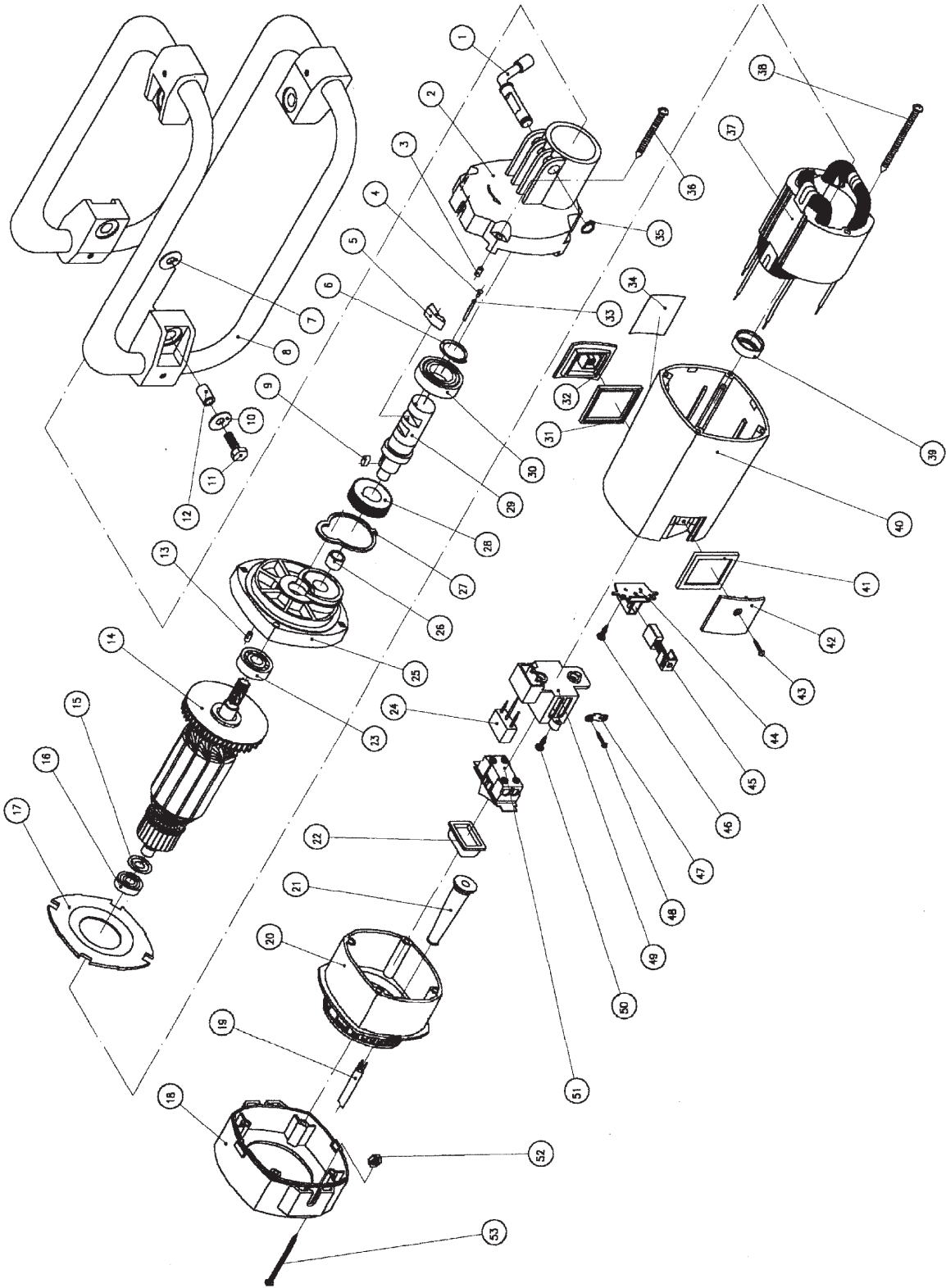
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Vibrator Motor Assembly Parts List

Item	Description	Qty
1	Connecting Spanner	1
2	Gear Box	1
3	Stop Screw, 5x10	1
4	Rivet, 2.5x5	1
5	Push Block	1
6	Circlip 25	1
7	Plain Washer, 8-140HV	4
8	Supporting bracket	1
9	Flat Key, 5x12	1
10	Plain Washer, 8-140HV	4
11	Bolt, M8x30	4
12	Supporting Spacer	4
13	Stop Screw, 5x10	1
14	Armature Assembly	1
15	Dust-proof Cover, 100	1
16	Bearing, 60100	1
17	Wind-block Plate	1
18	End Cover	1
19	Plug Assembly, 1x4.7	1
20	Rear Cover	1
21	Cable Protector, 9	1
22	Water-proof Switch Cover	1
23	Bearing, 60102	1
24	Breaker, 0.2u+4700Px2	1
25	Mid-cover	1
26	Bearing, 12E8x16x12	1
27	Oil Seal Ring	1

Item	Description	Qty
28	First Driven Gear	1
29	Main Shaft	1
30	Bearing, 60105	1
31	Rubber Washer, II	1
32	Cover Plate	1
33	Roller Pin, 2.5x27	1
34	Name Plate	1
35	Circlip 12	1
36	Screw, ST5.5x55-C	4
37	Stator Assembly	1
38	Screw, ST5.5x80-C-H	2
39	Bearing Cover	1
40	Motor Housing	1
41	Rubber Washer, I	1
42	Cover Plate	1
43	Screw, ST4.2x25-C	2
44	Brush Housing, 8x16	2
45	Brush Assembly, 8x16x18	2
46	Screw, ST4.2x13-C-H	4
47	Cable Pressing Plate	1
48	Screw, M4x10	2
49	Switch Base	1
50	Screw, ST4.2x13-C-H	2
51	Switch, DPST-16	1
52	Nut Screw, M8	4
53	Screw, ST4.8x90-C	4

Vibrator Motor Assembly



NOTE: Some parts are listed and shown for illustration purposes only and are not available individually as replacement parts.

LIMITED 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 this product is free from defects in materials and workmanship for the period of 90 days from the date of purchase. This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, 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.

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