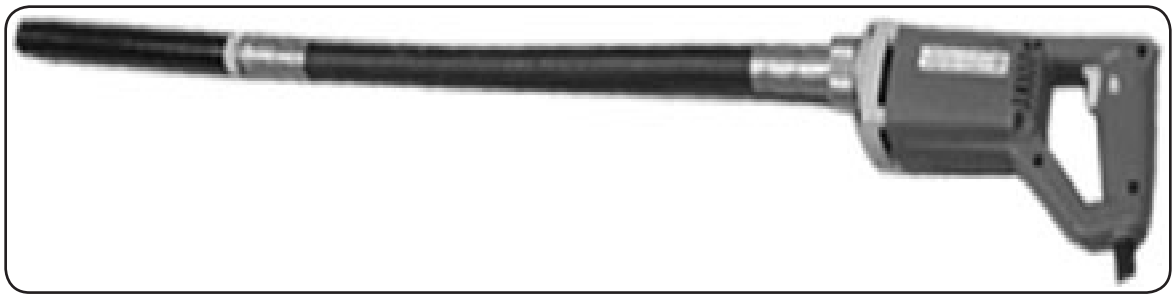
CHICAGO
Electric® Power Tools

3/4 HP CONCRETE VIBRATOR

Model 34923

SET UP AND OPERATING INSTRUCTIONS



Diagrams within this manual may not be drawn proportionally.

Due to continuing improvements, actual product may differ slightly from the product described herein.

Distributed exclusively by Harbor Freight Tools®.

3491 Mission Oaks Blvd., Camarillo, CA 93011

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© 2003 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.

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

Cover Revised 07j

SPECIFICATIONS

Motor	3/4 HP, 110 Volt, 60 Hz, 580 Watts
Vibration Speed	13,000 VPM
Head Dimensions	1-3/8” Diameter x 15-1/8” Long
Flexible Shaft Size	1.216” Diameter x 20.18” Long
Power Cord	18 Gauge

Features a Lock Button Trigger.

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 RULES



WARNING! Read all instructions
Failure to follow all instructions listed below may result in electric shock, fire, and/or serious injury. The term “power tool” in all of the warnings listed below refers to your line-operated (corded) power tool or battery-operated (cordless) power tool.

SAVE THESE INSTRUCTIONS

WORK AREA

1. **Keep your work area clean and well lit.** Cluttered benches and dark areas invite accidents.

2. **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.** Power tools create sparks which may ignite the dust or fumes.

3. **Keep bystanders, children, and visitors away while operating a power tool.** Distractions can cause you to lose control. Protect others in the work area from debris such as chips and sparks. Provide barriers or shields as needed.

ELECTRICAL SAFETY

1. **Grounded tools 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.** If the tools should electrically malfunction or

break down, grounding provides a low resistance path to carry electricity away from the user.

2. **Double insulated tools are equipped with a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install a polarized outlet. Do not change the plug in any way.** Double insulation ⧈ eliminates the need for the three wire grounded power cord and grounded power supply system.

3. **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.

4. **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.

5. **Do not abuse the Power Cord. Never use the Power Cord to carry the tools or pull the Plug from an outlet. Keep the Power Cord away from heat, oil, sharp edges, or moving parts. Replace damaged Power Cords immediately.** Damaged Power Cords increase the risk of electric shock.

6. **When operating a power tool outside, use an outdoor extension cord marked "W-A" or "W".** These extension cords are rated for outdoor use, and reduce the risk of electric shock.

PERSONAL SAFETY

1. **Stay alert. Watch what you are doing, and use common sense when operating a power tool. Do not use a power tool while tired or under the influence of drugs, alcohol, or medication.** A moment of inattention while operating power tools may result in serious personal injury.

2. **Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing, and gloves away from moving parts.** Loose clothes, jewelry, or long hair can be caught in moving parts.

3. **Avoid accidental starting. Be sure the Power Switch is off before plugging in.** Carrying power tools with your finger on the Power Switch, or plugging in power tools with the Power Switch on, invites accidents.

4. **Remove adjusting keys or wrenches before turning the power tool on.** A wrench or a key that is left attached to a rotating part of the power tool may result in personal injury.

5. **Do not overreach. Keep proper footing and balance at all times.** Proper footing and balance enables better control of the power tool in unexpected situations.

6. **Use safety equipment. Always wear eye protection.** Dust mask, non-skid safety shoes, hard hat, or hearing protection must be used for appropriate conditions.

TOOL USE AND CARE

1. **Use clamps (not included) or other practical ways to secure and support the workpiece to a stable platform.** Holding the work by hand or against your body is unstable and may lead to loss of control.

2. **Do not force the tool. Use the correct tool for your application.** The correct tool will do the job better and safer at the rate for which it is designed.

3. **Do not use the power tool if the Power Switch does not turn it on or off.** Any tool that cannot be controlled with the Power Switch is dangerous and must be replaced.

4. **Disconnect the Power Cord Plug from the power source before making any adjustments, changing accessories, or storing the tool.** Such preventive safety measures reduce the risk of starting the tool accidentally.

5. **Store idle tools out of reach of children and other untrained persons.** Tools are dangerous in the hands of untrained users.

6. **Maintain tools with care. Keep cutting tools sharp and clean.** Properly maintained tools with a sharp cutting edge are less likely to bind and are easier to control. Do not use a damaged tool. Tag damaged tools “Do not use” until repaired.

7. **Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tool’s operation. If damaged, have the tool serviced before using.** Many accidents are caused by poorly maintained tools.

8. **Use only accessories that are recommended by the manufacturer for your model.** Accessories that may be suitable for one tool may become hazardous when used on another tool.

SERVICE

1. **Tool service must be performed only by qualified repair personnel.** Service or maintenance performed by unqualified personnel could result in a risk of injury.

2. **When servicing a tool, use only identical replacement parts. Follow instructions in the *“Inspection, Maintenance, And Cleaning”* section of this manual.** Use of unauthorized parts or failure to follow maintenance instructions may create a risk of electric shock or injury.

SPECIFIC SAFETY RULES

1. **Maintain labels and nameplates on the Concrete Vibrator.** These carry important information. If unreadable or missing, contact Harbor Freight Tools for a replacement.

2. **Always wear safety impact eye goggles and heavy work gloves when using the Concrete Vibrator.** Using personal safety devices reduce the risk for injury. Safety impact eye goggles and heavy work gloves are available from Harbor Freight Tools.

3. **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 a power tool in areas near flammable chemicals, dusts, and vapors. Do not use this product in a damp or wet location.

4. **Make sure to read and understand all instructions and safety precautions as outlined in this manual.**

5. **When using a hand-held power tool, always maintain a firm grip on the tool with both hands to resist starting torque.**

6. **Always keep the electrical cord away from moving parts on the tool.**

7. **Avoid unintentional starting.** Make sure you are prepared to begin work before turning on the Concrete Vibrator.

8. **Do not force the Concrete Vibrator.** This tool will do the work better and safer at the speed and capacity for which it was designed.

9. **Never leave the Concrete Vibrator unattended when it is plugged into an electrical outlet.** Turn off the tool, and unplug it from its electrical outlet before leaving.

10. **Always unplug the Concrete Vibrator from its electrical outlet before performing and inspection, maintenance, or cleaning procedures.**

11. **Never carry the Concrete Vibrator by the Vibrating Head or Cable**. Always carry it by the Handle, supporting the head and cable.

12. **Never take the Vibrator Head out of the concrete while it is running.** Always turn off the unit before removing it from concrete or it will throw concrete all over the worksite.

13. **Keep water and concrete away from the Vibrator motor and do not allow it to enter the Vibrator Head assembly.** This could cause electric shock to the operator and damage the motor and bearings.

14. **WARNING!** Some dust created by power sanding, sawing, grinding, drilling, and other construction activities, contain 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 or other masonry products, 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 those dust masks that are specially designed to filter out microscopic particles. (California Health & Safety Code § 25249.5, *et seq.*)

15. **People with pacemakers should consult their physician(s) before use.** Electromagnetic fields in close proximity to heart pacemaker could cause pacemaker interference or pacemaker failure. In addition, people with pacemakers should:
    - Avoid operating alone.
    - Don't use with power switch locked on.
    - Properly maintain and inspect to avoid electrical shock.
    - Any power cord must be properly grounded. Ground Fault Circuit Interrupter (GFCI) should also be implemented – it prevents sustained electrical shock.

GROUNDING

⚠WARNING **Improperly connecting the grounding wire can result in electric shock.**



Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded. Do not modify the power cord plug provided with the tool. Never remove the grounding prong from the plug. Do not use the tool if the power cord or plug is damaged. If damaged, have it repaired by a service facility before use. If the plug will not fit the outlet, have a proper outlet installed by a qualified electrician.

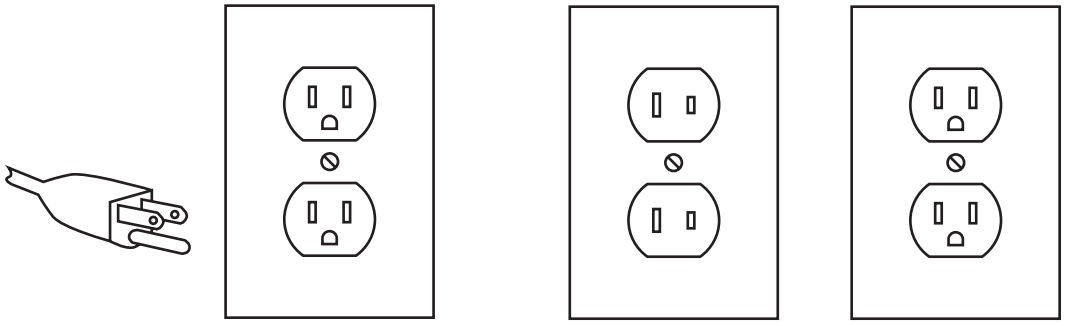
Grounded Tools: Tools with Three Prong Plugs

1. Tools marked with "Grounding Required" have a three wire cord and three 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 3-Prong Plug and Outlet.)**

2. 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 3-Prong Plug and Outlet.)**

3. The 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.
(See 3-Prong Plug and Outlet.)



3-Prong Plug and Outlet **Outlets for 2-Prong Plug**

Double Insulated Tools: Tools with Two Prong Plugs

1. Tools marked "Double Insulated" do not require grounding. They have a special double insulation system which satisfies OSHA requirements and complies with the applicable standards of Underwriters Laboratories, Inc., the Canadian Standard Association, and the National Electrical Code.
(See Outlets for 2-Prong Plug.)

2. Double insulated tools may be used in either of the 120 volt outlets shown in the preceding illustration. **(See Outlets for 2-Prong Plug.)**

Extension Cords

1. ***Grounded*** tools require a three wire extension cord. ***Double Insulated*** tools can use either a two or three wire extension cord.

2. 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.
(See Table A.)

3. 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.
(See Table A.)

4. 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. **(See Table A.)**

5. 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. **(See Table A.)**

6. 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.

7. Make sure the 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.

8. Protect the extension cords from sharp objects, excessive heat, and damp or wet areas.

RECOMMENDED MINIMUM WIRE GAUGE FOR EXTENSION CORDS* (120/240 VOLT)					
NAMEPLATE AMPERES (at full load)	**EXTENSION CORD LENGTH**				
	25 Feet	**50 Feet**	**75 Feet**	**100 Feet**	**150 Feet**
0 – 2.0	18	18	18	18	16
2.1 – 3.4	18	18	18	16	14
3.5 – 5.0	18	18	16	14	12
5.1 – 7.0	18	16	14	12	12
7.1 – 12.0	18	14	12	10	-
12.1 – 16.0	14	12	10	-	-
16.1 – 20.0	12	10	-	-	-
TABLE A	*** Based on limiting the line voltage drop to five volts at 150% of the rated amperes.**				

Symbology

	Double Insulated	**V~**	Volts Alternating Current
	Canadian Standards Association	**A**	Amperes
	Underwriters Laboratories, Inc.	n_0 xxxx/min.	No Load Revolutions per Minute (RPM)

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 all the parts shown on the **Parts List on pages 12 and 14** are included. 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.

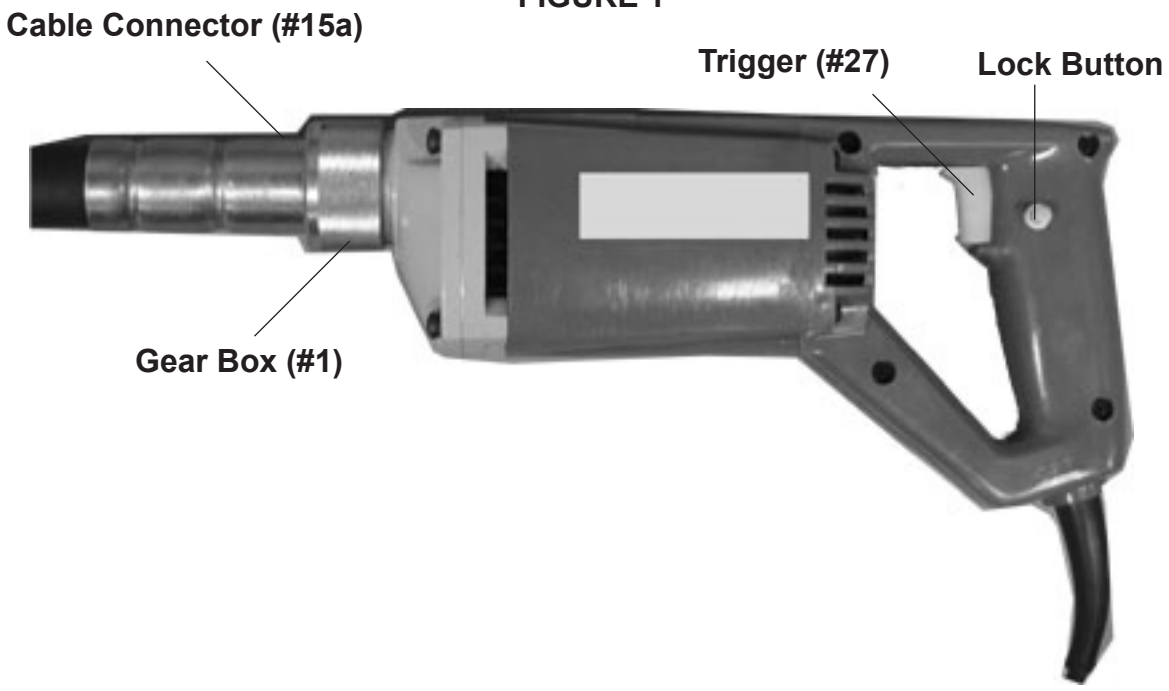
ASSEMBLY INSTRUCTIONS

Note: For additional information regarding the parts listed in the following pages, refer to the **Assembly Diagram on pages 13 and 14**.

CAUTION: Always make sure the Power Cord of the Concrete Vibrator is unplugged from its electrical outlet *prior* to making any adjustments to the tool.

To **Assemble** the unit, insert the **Cable Connector (#15a)** inside the **Gear Box (#1)** and turn it until it locks into place. See **FIGURE 1**.

FIGURE 1



OPERATING INSTRUCTIONS

1. Plug in the unit and carry it to where the cement is being poured. **Never carry the Concrete Vibrator by the Vibrating Head or Cable**. Always carry it by the Handle, supporting the head and cable.

2. Turn the motor on by gently squeezing the **Trigger**. Strike the head sharply against a solid surface such as a concrete floor or pavement. This “shocking” of the head, will start the Head vibrating, and must be done every time you use the unit.

3. Insert the Vibrator Head and Flexible Cable Assembly into the concrete. **Warning!** Never allow water or wet concrete to come in contact with the motor and the electrical cord. This could cause electric shock to the operator and damage the motor.

4. With the **Trigger** squeezed, move the Vibrator Head up and down in the concrete to remove all of the air bubbles. **Warning!** Do not allow water to enter the Vibrator Head assembly or it could damage the bearings inside. Next to the **Trigger** there is a lock button. If you want to lock the unit on, press the lock button while squeezing the **Trigger**. Then, you can let go of the **Trigger**. To disengage the lock button, pull the **Trigger**. See **FIGURE 1**.

5. When you are finished, turn off the unit by letting go of the **Trigger**, and unplug the power cord from the outlet. Immediately wash down the Vibrator Head and Flexible Cable with clean water. Be careful not to wet the Vibrator Motor Assembly during cleaning.

INSPECTION, MAINTENANCE, AND CLEANING

⚠**WARNING!** Make sure the **Trigger (#27)** is disengaged, and that the tool is unplugged from its electrical outlet before performing any inspection, maintenance, or cleaning procedures.

1. **BEFORE EACH USE,** inspect the general condition of the Concrete Vibrator. 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.**

2. Clean all components with a damp cloth after each use. Remove all concrete residue.

3. After more than 100 hours, the Vibrating Head Assembly and Flexible Cable Assembly may require cleaning and lubrication. Also, the motor brushes may need cleaning or replacement. This should be done by a qualified technician.

PARTS LIST – CONCRETE VIBRATOR MOTOR

Part	Description	Qty.
1	Gearbox	1
2	Bearing	1
3	Main Spindle	1
4	Driven Gear	1
5	Bearing	1
6	Middle Cover	1
7	Stop Pin	1
8	Bearing	1
9	Armature Assy.	1
10	Bearing	1
11	Screw	1
12	Spring Washer	2
13	Washer	2
14	Screen	1
15	Spring Washer	4
16	Screw	4
17	Stator Assy.	1
18	Stop Pin	1

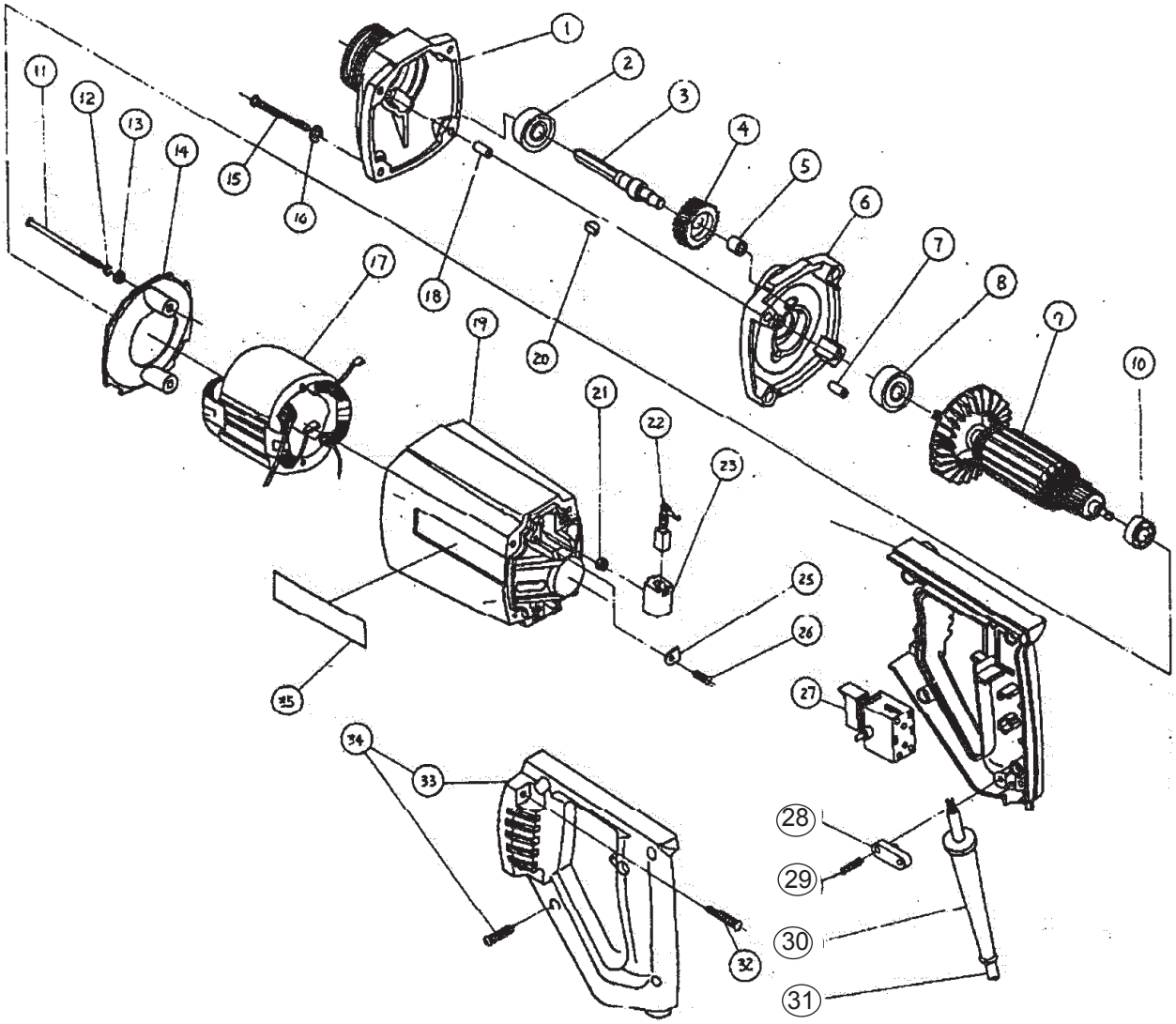
Part	Description	Qty.
19	Housing	1
20	Key	1
21	Nut	2
22	Carbon Brush Assy.	4
23	Brush Box Assy.	2
24	Right Handle Cover	1
25	Brush Box Press Plate	2
26	Tapping Screw	2
27	Trigger	1
28	Cord	1
29	Tapping Screw	2
30	Strain Relief	1
31	Cord	1
32	Tapping Screw	4
33	Left Cover	1
34	Tapping Screw	4
35	Nameplate	1

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.

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

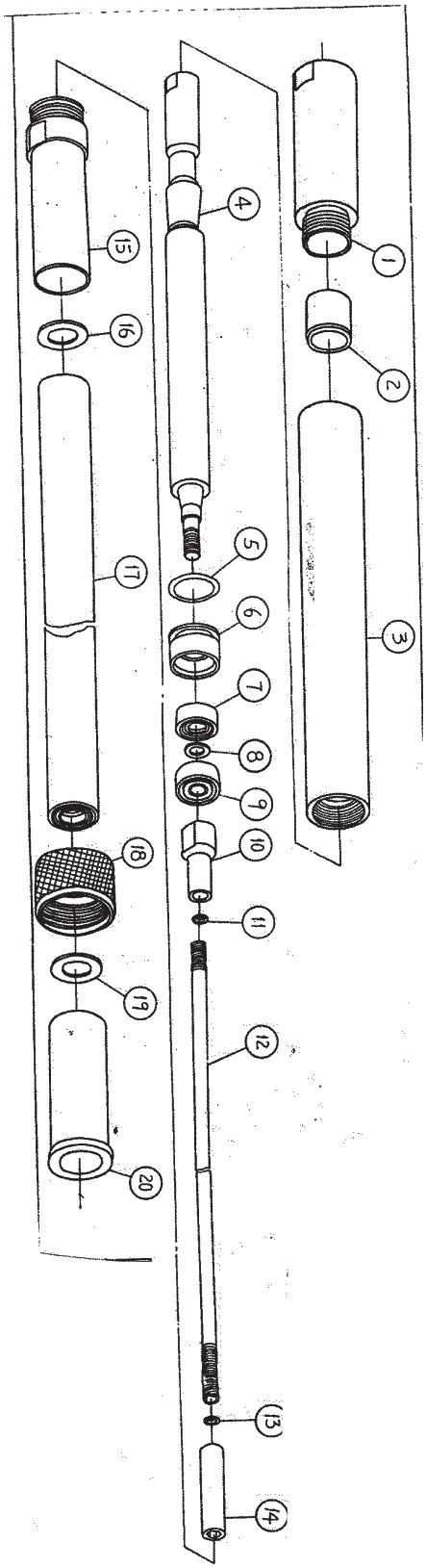
ASSEMBLY DIAGRAM – CONCRETE VIBRATOR MOTOR



PARTS LIST AND ASSEMBLY DIAGRAM A – CONCRETE VIBRATOR HEAD

Note: When ordering parts from this parts list, add the suffix “a” to the part number.

Part	Description
1a	Head End
2a	Channel
3a	Annular Tube
4a	Rolling Cone
5a	0-ring
6a	Grease Seal Ring
7a	Grease Seal
8a	Washer
9a	Bearing
10a	Flexible Shaft Connector
11a	Flexible Shaft Washer
12a	Flexible Shaft
13a	Flexible Shaft Washer
14a	Flexible Shaft Connector
15a	Cable Connector
16a	Cable Washer
17a	Cable
18a	Connection Nut
19a	Cable Washer
20a	Cable Connector



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.

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