CONCRETE VIBRATORS & DOWEL PIN DRILLS

Hydraulic Internal Vibrator Service Manual

Hours of Operation
8:00AM to 4:30PM Mon. – Fri. Eastern Standard Time

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MINNICH MANUFACTURING CO.
WARRANTY AND SERVICE AGREEMENT

Minnich Manufacturing Co. warrants to the original purchaser that, if any part of the product proves defective in material or workmanship within one year from purchase, and is returned to Minnich Manufacturing Co. within 90 days after the defect is discovered, Minnich Manufacturing Co. will at its option repair or replace said part. Product shipped to Minnich Manufacturing Co. freight prepaid will be returned freight prepaid. Product shipped to Minnich Manufacturing Co. freight collect will be returned freight collect.

LIMITATIONS:

Warranty does not apply to repairs that are required because of normal wear or tear, parts or products that are damaged as a result of misuse, neglect, accident or fire, or of lightning, flooding or other acts of God, or by improper installation or maintenance, of which Minnich Manufacturing Co. will be the sole judge. Warranty does not apply to parts or products that have been modified by an unauthorized party that has in Minnich Manufacturing Co.'s judgment affected their performance or reliability. Warranty does not apply if the part or product substantially fulfills the performance specifications.

Minnich Manufacturing Co. shall not in any event be liable for the cost of any special, indirect, or consequential damages as a result of this product.

SERVICE:

Out of warranty service is available through Minnich Manufacturing Co.

GENERAL SAFETY RULES

This manual contains NOTES, CAUTIONS, and WARNINGS. These MUST be followed to prevent the possibility of improper use, incorrect servicing, damaging the equipment, or personal injury. Read and comply with all NOTES, CAUTIONS and WARNINGS included in these instructions.

NOTE: Notes contain additional information important to the operation of the equipment.

CAUTION: Cautions provide important information to prevent mistakes that could result in damage to the equipment.

 **WARNING:** Warnings alert one to practices or conditions that could lead to personal injury or death!

 **WARNING**

Read and understand all instructions.
Failure to follow all instructions listed below may result in one or all of the following; electric shock, fire, and serious injury.

 **WARNING**
DO NOT USE TOOL IF IT IS IN NEED OF SERVICE!

SAVE THESE INSTRUCTIONS

- WORK AREA –

Keep your work area clean and well lit.

Cluttered and dark areas invite accidents.

DO NOT operate power tools in explosive atmospheres, such as, in the presence of flammable liquids, gases, or dust.

Power tools create sparks that may ignite the dust or fumes.

Keep bystanders, children, and visitors away while operating a power tool.

Distractions can cause you to lose control.

- PERSONAL SAFETY -

Stay alert, watch what you are doing and use common sense when operating a power tool. DO NOT use tool while tired or under influence of drugs, alcohol or medication.

A moment of inattention while operating power tools may result in serious personal injury.

Dress properly. DO NOT wear loose clothing, or jewelry. Tie up long hair. Keep your hair, clothing, and gloves away from moving parts.

Loose clothes, jewelry, or long hair can be caught in moving parts.

Avoid accidental starting. Be sure switch is off before plugging in.

Carrying tools with your finger on the switch or plugging in tools that have switches on invites accidents.

DO NOT overreach. Keep proper footing and balance at all times.

Proper footing and balance enables better control of the tool in unexpected situations.

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 -

DO NOT force 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.

DO NOT use tool if switch does not turn it on or off.

Any tool that cannot be controlled with the switch is dangerous and must be repaired.

Disconnect the 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.

Store tools out of the reach of children and other untrained persons.

Tools are dangerous in the hands of untrained users.

Maintain tools with care. Keep tools clean.

Properly maintained tools are less likely to bind and are easier to control.

Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tools operation. If damaged, have the tool serviced before using.

Many accidents are caused by poorly maintained tools.

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 -

Tool service must be performed only by qualified repair personnel.

Service or maintenance performed by unqualified personnel could result in a risk of injury.

When servicing a tool, use only identical replacement parts. Follow instructions in the maintenance section of this manual.

Use of unauthorized parts or failure to follow maintenance instructions may create a risk of injury.

CONCRETE PLACEMENT AND CONSOLIDATION

When concrete, a mixture of cement, sand, aggregates and water, is placed it contains a high volume of entrapped air. If the concrete is allowed to harden in this condition, it will be porous, non-uniform in consistency and weak. Therefore, concrete must be consolidated to attain acceptable results. The most widely used method for concrete consolidation is vibration and for slip form paving this is accomplished by an internal vibrator.

The most common form of an internal vibrator, used for slip form paving, consists of an out-of-balance shaft (eccentric) mounted in bearings and located longitudinally within a tubular housing. This eccentric is driven at a high rate of speed by a motor, usually hydraulic, but also can be electric or air.

When the eccentric weight is rotating, with its center of gravity offset from the rotational center of the vibrator, it generates the centrifugal force which causes the vibrator to orbit or vibrate. This orbiting action of the vibrator is resisted by the concrete around it. The impulses created by the vibrator liquefies the mortar (cement, sand and water) and greatly reduces the internal friction between the aggregates. While in this Aliquid@ condition, the concrete settles under influence of gravity forcing the entrapped air to the surface. When the action of the vibrator ceases, the internal friction returns.

Due to the mounting configuration of a vibrator, the orbiting action of the vibrator is in the form of a cone. The larger diameter or base of the cone is at the tip of the vibrator=s eccentric head to the smaller diameter at the motor housing, which is just slightly larger than the vibrator itself. The effect of this cone shaped movement of the vibrator is transferred to the concrete at a distance determined by the speed (VPM) and movement (amplitude) of the vibrator. This is known as the radius of influence.

The force exerted by an internal concrete vibrator is controlled by the weight and the speed at which the eccentric rotates. The centrifugal force exerted can be arrived at by various combinations of weight (size of eccentric weight) and the speed at which the weight rotates. For years the most favorable working speed for a vibrator was considered to be around 10,200 RPM (VPM) and consequently this figure is used in many vibrator comparisons. More recently, the optimum speed for compaction has been accepted as being between 7500 and 9000 RPM.

The relationship between speed and centrifugal force of a vibrator is not a straight line function. The centrifugal force varies as the square of the speed. This results in that a 10% change in RPM will be reflected by a 21% change in the centrifugal force and a 20% change in RPM will be reflected by a 44% change in the centrifugal force.

TROUBLESHOOTING VIBRATOR PROBLEMS

Pressure	Flow	VPM	Problem
Low	Normal	None	Sheared drive pin or drive shaft
Normal	Normal	Low	Motor worn (high slippage)
High	Normal	Low	Failing motor seal (flooded eccentric head) Eccentric or motor bearings failing
High	None	None	Blocked flow at disconnect Eccentric bearings failed Debris jammed in between motor gears

Disassembly and Repair of a Minnich Paving Vibrator

I. Disassembly and repair of the eccentric tip.

The bearings on the eccentric weight should be inspected every 600 hours or annually. Before beginning the disassembly of the eccentric tip, clean all concrete from the outside of the vibrator assembly. Securely clamp the upper (motor) housing in a vise or fixture. A pipe vise is best suited for this operation.

Place a pipe wrench on the extreme tip of the of the eccentric housing and remove it by turning it counterclockwise.

Slip the threaded end of the eccentric housing assembly into the bump tube. Strike the open end of the bump tube and eccentric assembly sharply on a hard surface (floor or metal plate) until the eccentric assembly slips free from the housing.

After the eccentric assembly is removed from the housing, remove the bearing housing from the bearings on one end of the eccentric assembly.

Clamp the eccentric assembly in a vise in a vertical position. Using a hammer and screwdriver, straighten the tab on the locking washer that is engaged into the notch of the bearing lock nut.

Using a spanner wrench, remove the nut from the eccentric weight by turning it counterclockwise.

Remove the two bearings and shims from the eccentric weight. Repeat the procedure on the other end of the eccentric weight.

Clean off the bearings with solvent or diesel fuel. Spin the bearings to check for roughness or wear. If roughness or wear is detected, the bearings must be replaced. It is recommended that new bearings and shims be installed when rebuilding an eccentric assembly. It has been determined that relubricated bearings do not last as long as new bearings.

If bearings are to be repacked, carefully remove the seals from the bearings and wash out with clean solvent and dry. Repack bearing to 50% fill with high speed, high temperature, non-water soluble grease (Polyrex EM2 or equal). Carefully reinstall seals and work grease into bearing by rolling it back and forth before installing bearing on eccentric weight.

Install the first bearing, then two .002" shims, then the second bearing

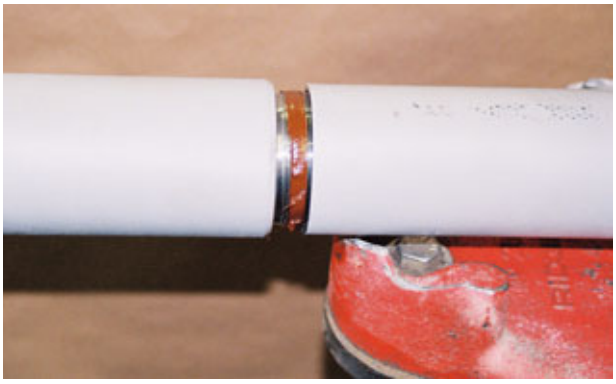
Install the bearing lock washer with its center tab in the groove and the outside tabs away from the bearing.

Install the bearing locknut with the chamfer toward the bearing. Tighten the nut securely and bend one of the lock washer tabs into one of the slots in the side of the nut.

Repeat this process with the bearings on the other end of the eccentric weight. Inspect bearing housing for any signs of a bearing having a loose fit and having spun in the housing. Replace housing if it shows any signs of the bearing having spun. Install bearing housing over bearings on one end of the eccentric assembly

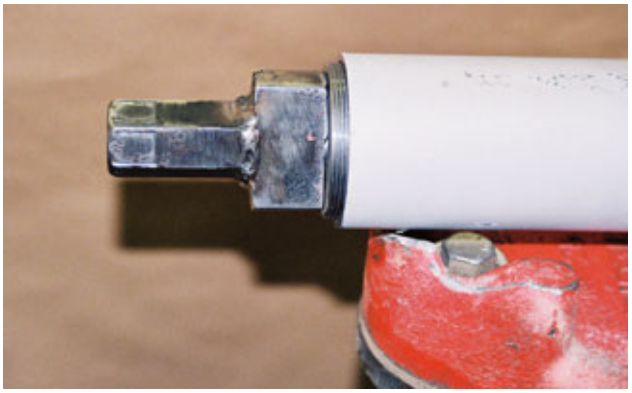
Make sure that the inside of the eccentric tube is clean before starting to install the eccentric weight assembly into it. Insert the eccentric assembly into the housing with the bearing housing towards the open end. Using a rubber mallet, tap the assembly into the tube until the bearing housing is flush with the end of the eccentric tube.

Apply #1 Permatex or equivalent thread sealer to the threads of the eccentric housing and screw into motor housing. Place a pipe wrench on tip of the eccentric housing and tighten it securely. Test the vibrator on a 4 g.p.m. test stand or using a vibrator circuit on a machine.



II. Disassembly and repair of vibrator motor.

If a vibrator fails to come up to speed under full flow or any oil is found in eccentric housing when inspecting or repairing the bearings, it is an indication` that the motor shaft seal is failing and must be replaced. Place vibrator in a vice and, if still assembled, remove the eccentric housing assembly as described above. Using motor lock nut spanner wrench, remove motor lock nut. Carefully remove lock nut Ao-ring seal from motor housing.



With a pair of internal snap ring piers remove large bearing retaining ring from motor.

Clamp motor drive shaft with a pair of vice grips. Tap the vice grips with a mallet until the shaft and bearing assembly comes out.

The shaft is hardened and the vice grips will not mar it. Remove the seal washer exposing the seal housing.

Remove the seal from the motor housing using a hooked tool.

The seal can also be removed by applying a slight amount of air pressure to the return line of the vibrator. Care is to be taken not to stand in front of motor when doing this.

With the seal assembly out of the motor carefully examine the seal area on the shaft of the drive gear. If there are any signs of wear or any scratches, the drive gear must be replaced also.

Since it is difficult to tell whether it is the internal shaft seal o-ring or the outer o-ring that is bad replace both using a new seal assembly. Dip seal assembly in oil and install it with the chamfered side of the seal housing towards the motor. Push it firmly into place, taking care that the external o-ring is properly seated.

Before reassembling motor, check machined seal washer to be certain that it is perfectly flat and not bowed due to pressure. An easy way of doing this is to put seal washer face down (side with recess) on a hard , flat surface and put down-pressure with two fingers on opposite sides of rim and see if it sits firmly or wobbles

If washer is not flat, replace it. Install seal washer with machined step towards the seal assembly.

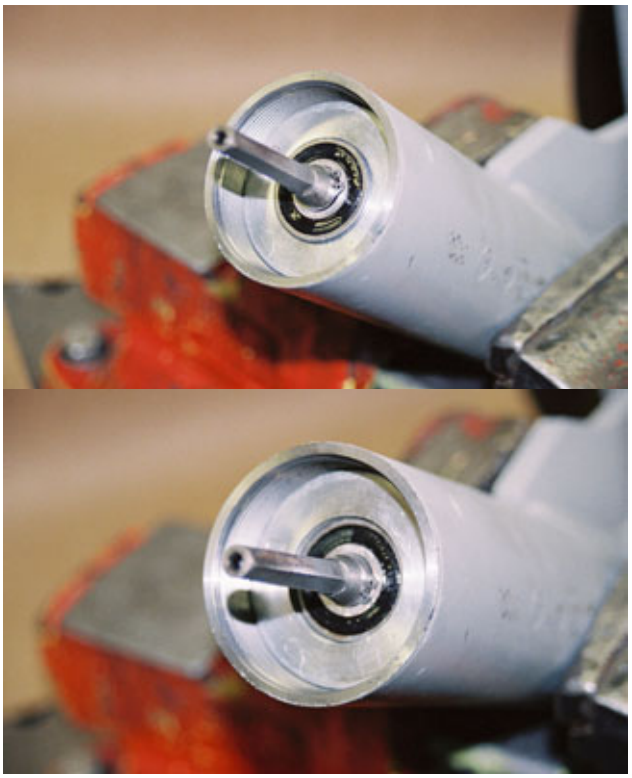
Spin the bearing on the drive shaft to check for any wear or roughness. If any roughness or wear is evident, the bearing must be replaced. Inspect the drive pin inside the motor drive shaft. If it is worn or damaged, it also must be replaced. To replace the bearing, remove the retaining ring using a pair of snap ring pliers and press bearing off shaft.

To replace the drive pin, the bearing must be removed as described above. Push the drive pin from the drive shaft. Install the new pin until the ends of the pin are flush with the edges of the shaft.

It is recommended that a new bearing be installed when rebuilding the drive shaft. It has been determined that relubricated bearings do not last as long as new bearings. Install the bearing by pressing it onto the shaft. Install the retaining ring to secure the bearing in place.

If bearings are to be repacked, carefully remove the seals from the bearing and wash out with clean solvent and dry. Repack bearing to 50% fill with high speed, high temperature, non-water soluble grease (Polyrex EM2 or equal). Carefully reinstall seals and work grease into bearing by rolling it back and forth before installing it on the drive shaft.

Visually align the pin in the drive shaft with groove in end of drive gear. Insert the drive shaft and bearing assembly into the motor housing. Using a piece of tubing or a socket matching the outside diameter of the outer bearing race, carefully tap the assembly into the housing until the race is nearly flush with the motor housing. Once the assembly is in the bore, slowly rotate the output shaft to engage the slot in the drive gear with the pin of the drive shaft. Tap on drive shaft with rubber hammer until the groove for the retaining ring is fully exposed. Install the retaining ring using a pair of snap ring pliers.

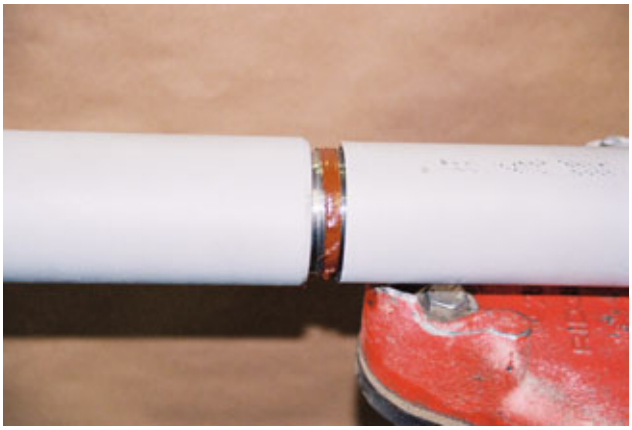


Install the sealing o-ring into the motor housing flush against the motor. The reason for this o-ring seal is to keep any liquids from getting past the motor in either direction. In case of a motor seal failure it will keep the oil from getting past the motor into the upper part of the vibrator assembly.

Install the motor lock nut and tighten securely using the motor lock nut spanner wrench.

It is recommended that the vibrator be connected to a 4 g.p.m. hydraulic test stand or a vibrator circuit on a machine to be tested for seal leakage and correct rotation. The motor shaft should rotate counterclockwise when looking at the end of the shaft.

Apply #1 Permatex or equivalent thread sealer to the threads of the eccentric housing and screw into motor housing. Place pipe wrench on the tip of the eccentric housing and tighten securely.

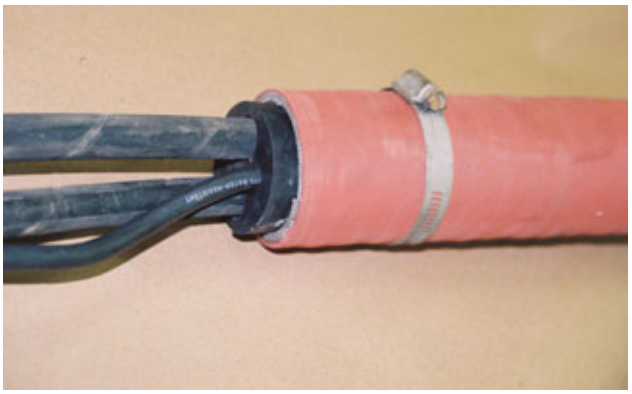


III. Removal and repair of motor & replacement of hydraulic hoses.

If the hydraulic motor requires repairs beyond seal replacement or the motor hoses need replacement, it will be necessary to remove the motor from the vibrator. Motor removal is not required for the replacement of the two extension hoses.

Before beginning the disassembly of the vibrator, clean all concrete from the outside of the vibrator assembly. Securely clamp the upper (motor) housing in a vise or a fixture. A pipe vise is best suited for this operation.

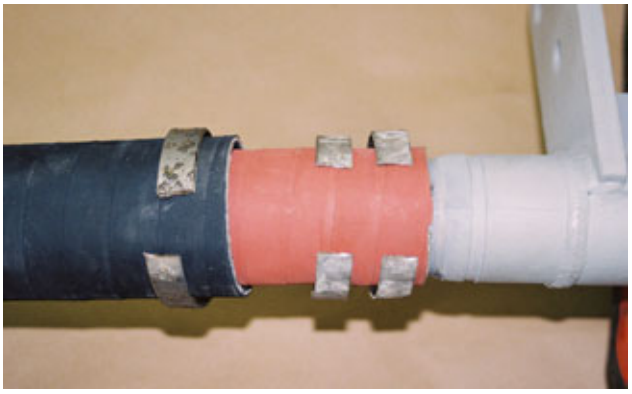
Loosen the hose clamp on the upper end of the cover hose and remove it. Remove the stopper plug from inside the upper end of cover hose.



Cut the clamp band from the protective hose with a cutting wheel or a hammer and sharp chisel. Slide the protective hose back, revealing the two clamp bands securing the cover hose to the motor housing. Cut these two clamps also as above. If protective hose has to be cut to be removed, do so with care so as not to damage the cover hose.

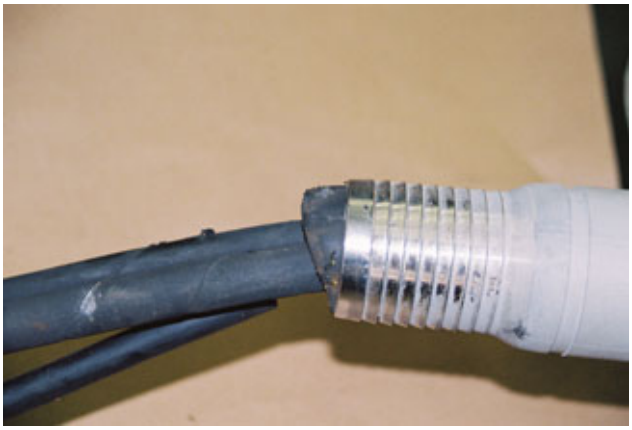
CAUTION:
USE CARE NEAR SHARP ENDS OF CUT BANDS TO AVOID PERSONAL INJURY.

Slide the cover hose back to expose the connections between the extension and motor hoses.



If oil is present inside the cover hose, connect the vibrator to a 4 g.p.m. test stand or vibrator circuit on a machine and run vibrator to check for oil leaks at the hose connections or the hoses themselves. If no leaks are apparent, disconnect the extension hoses from the motor hoses. If vibrator is equipped with a sensor for a MINNICH Auto Vibe system, unplug the extension cord at this time also.

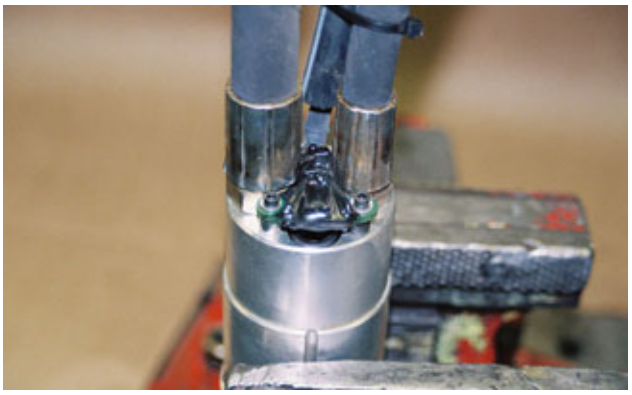
With a screwdriver, carefully pry out the tapered rubber plug from the end of the motor housing.



Remove the eccentric housing assembly from the motor tube as described in section I. Remove the motor lock nut with motor lock nut spanner wrench. Also remove sealing o-ring from motor housing. Remove motor housing from fixture or vise. Slide motor tube into motor bump tube. Strike open end of bump tube and motor housing assembly sharply on a hard surface (floor or metal plate) until the motor slips free from the motor housing.

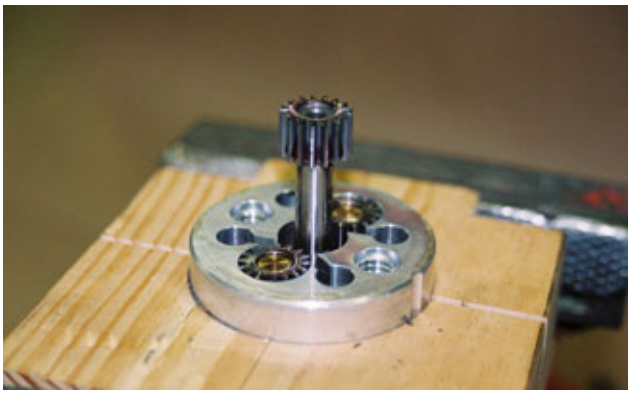
Pull motor with attached hoses (and cord from Auto Vibe sensor, if present) from motor tube.

Place motor housing in vise with the hoses up (either a fixture or with vise jaws gripping motor housing on the grooves). If motor is equipped with a MINNICH Auto Vibe sensor, using a 3/32" (.093") allen wrench, carefully remove the two socket head capscrews securing sensor to end cap. Cut the tie-wraps attaching cord to motor hose. Remove sensor and then both motor hoses.

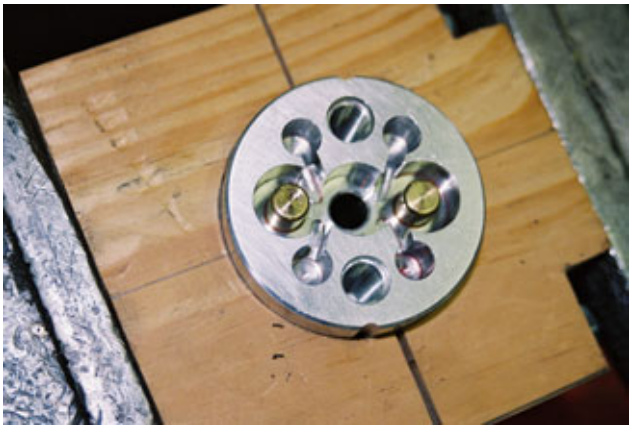


Using a 5/16" (.312") allen wrench remove the two socket head capscrews from the end cap and remove end cap and sealing o-ring. Inspect end cap for signs of gears digging in. Replace if necessary. A slight burnished pattern from the gears is common.

Rotate shaft to check for any binding in the gears or the bearing. Remove gears from motor and inspect for wear or broken teeth. Check shaft of drive gear for wear or scratches. If any wear or scratches are found on the shaft it must be replaced.

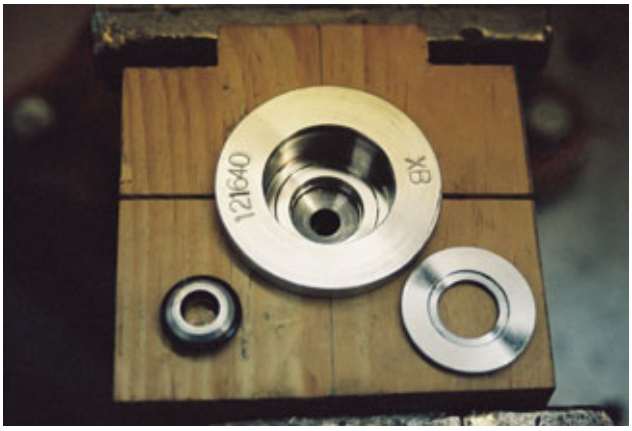


Inspect the gear cavities in the motor housing. They must be perfectly smooth. Closely check the bottom of the gear cavity. It must be perfectly flat with no sign that the drive gear is eating into the motor housing. If this is taking place, both the motor housing and drive gear must be replaced.



Remove motor housing from vise and using a pair of internal snap-ring pliers remove the large retaining ring securing the drive shaft assembly. Clamp the motor drive shaft in a vise horizontally. The shaft is hardened and the vise will not mar it. Tap the motor housing with a rubber mallet while rotating it until the bearing assembly comes out.

Remove seal washer and seal from motor housing. Check seal washer to be certain it is perfectly flat and not bowed due to pressure.



An easy way of doing this is to put washer face down (side with recess) on a flat surface and put down-pressure with two fingers on opposite sides of the rim and see if it sits firmly or wobbles. If washer is not flat, replace it. Wash all parts in clean solvent or diesel fuel.

Spin bearing on the drive shaft to check for any wear or roughness. If any wear or roughness is evident, the bearing must be replaced. Inspect the drive pin inside the motor drive shaft. If it is worn or damaged, it also must be replaced. To replace the bearing, remove the retaining ring using a pair of snap ring pliers and press the bearing off the shaft.

To replace the drive pin, the bearing must be removed as described above. Push the drive pin from the drive shaft. Install new pin until the ends of the pin are flush with the edges of the shaft.

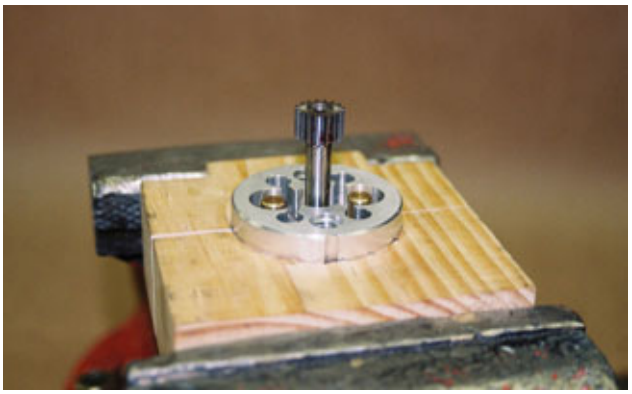
It is recommended that a new bearing be installed when rebuilding the drive shaft. It has been determined that relubricated bearings do not last as long as new bearings. Install the bearing by pressing it onto the shaft. Install the retaining ring to secure the bearing in place.

If bearings are to be repacked, carefully remove the seals from the bearing and wash out with clean solvent and dry. Repack bearing to 50% fill with high speed, high temperature, non-water soluble grease (Polyrex EM2 or equal). Carefully reinstall the seals and work grease into bearing by rolling it back and forth before installing it on the drive shaft.

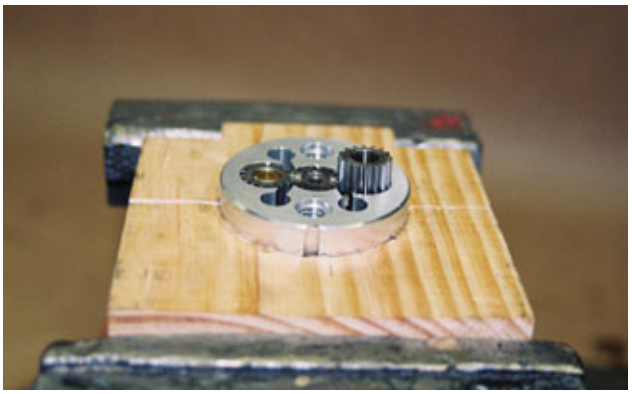
Place motor housing in vise with bearing pocket up (either a fixture or with vise jaws gripping motor housing on the grooves). Put small amount of grease in center of inside o-ring seal to lubricate it when drive gear is installed. Dip seal assembly in clean oil and install it in the pocket with the chamfered side of the seal housing towards the motor. Push it firmly into place, taking care that the external o-ring is properly seated. Install seal washer into housing with the machined step towards the seal assembly.

Insert the drive shaft and bearing assembly into the motor housing. Using a piece of tubing or a socket matching the outside diameter of the outer bearing race, carefully tap the assembly into the housing. Tap on the bearing until the slot for the locking ring is exposed. Install the retaining ring using a pair of snap ring pliers.

Turn motor housing over in the vise (gear pockets facing up). Dip the motor drive gear and shaft in clean hydraulic oil and install it in the housing while rotating the drive shaft to ensure proper engagement of gear and drive pin in drive shaft.

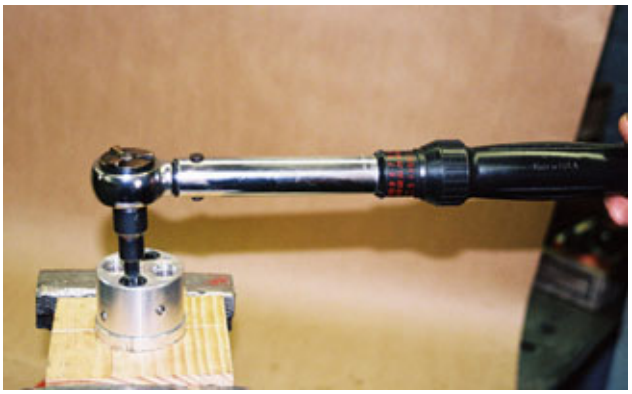


Dip the two idler gears in clean hydraulic oil and install them in pockets on either side of the drive gear. Rotate the output shaft to insure that the gears turn freely.



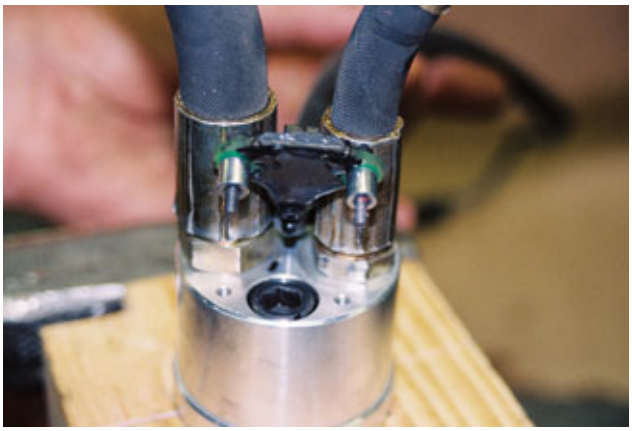
Take end cap and place small amounts of grease at three or four spots around the o-ring groove to keep o-ring in place while assembling end cap to motor housing. Install new o-ring into the groove of the end cap (old o-ring may not assure as good a seal).

Install the motor end cap and secure with two allen head cap screws. Dip cap screw threads in clean hydraulic oil before inserting them in motor housing. Tighten them evenly to 20 ft. lb. of torque with a 5/16" (.312") allen wrench. Turn output shaft to insure that the motor will turn freely.

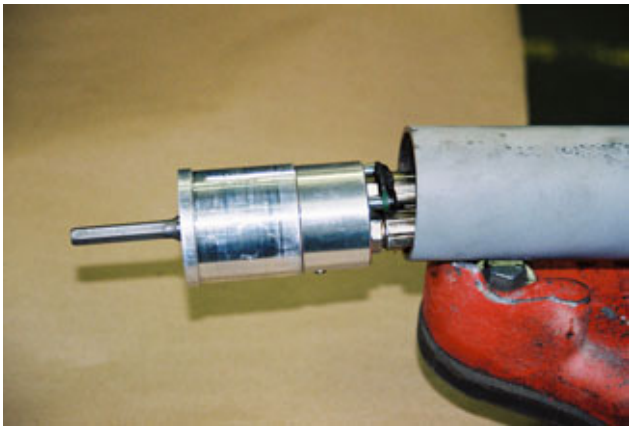


If existing motor hoses are to be used, it is recommended that new o-rings be installed on fittings. Connect the pressure hose (with a AP@ stamped on the fitting) to motor port marked AP@ (pressure). Connect the return hose to the other port and tighten both hoses. At this time it is recommended that quick disconnects be installed on the hoses and the motor be tested. Before installation check disconnects for cracks, debris and if the o-ring seal and back-up ring in the Afemale@ disconnect are in proper working order.

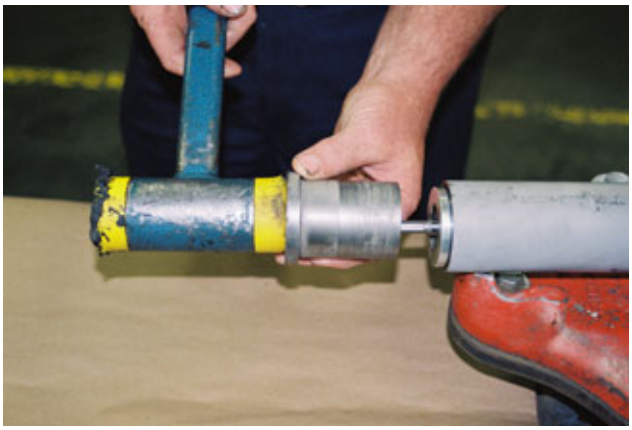
If motor was equipped with a sensor for the MINNICH Auto Vibe system carefully install the sensor at this time. Install stand-off=s between the sensor and motor end cap. Use new socket head cap screws to secure the sensor. If using old cap screws apply Loctite 242 (blue) before installing screws. Make sure that one flat washer is placed between the sensor and head of each screw. With a 3/32" (.093") allen wrench tighten to 12 in. lb. torque. Secure the cable to a motor hose with tie warps.



Place vibrator motor housing back in the vise. Slide the motor hoses into the motor housing. Align the grooves in the sides of the motor with the locating balls in the motor housing and slide the motor into place.



Tap with a rubber mallet, if necessary, on the motor drive tube to seat the motor into the housing.

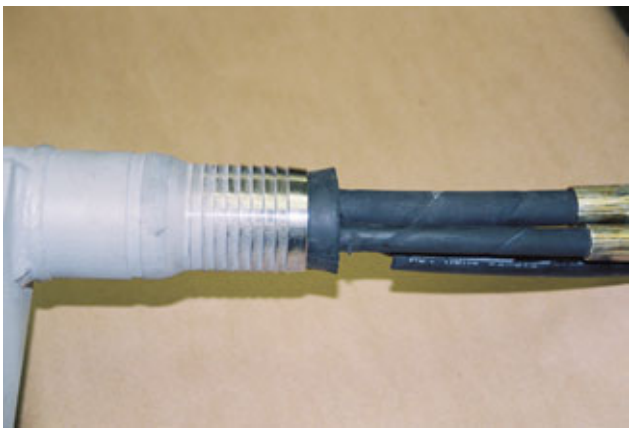


Install the sealing o-ring and seat against the motor.

Install the motor lock nut and tighten securely with motor lock nut spanner wrench.

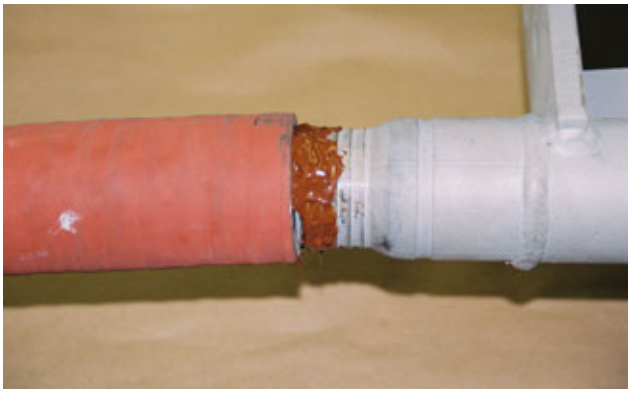
Finish vibrator assembly by installing the eccentric assembly as described in Section I.

Install the tapered rubber stopper around the two hoses (and cable if present). One hole in the stopper is larger than the other one to accommodate the larger return hose. Place rubber sealant (Permatex Black Rubber Sealant RS-9 or equivalent) around hoses (and cable) at stopper and tap it down into the motor housing until it is flush with the end of the housing.

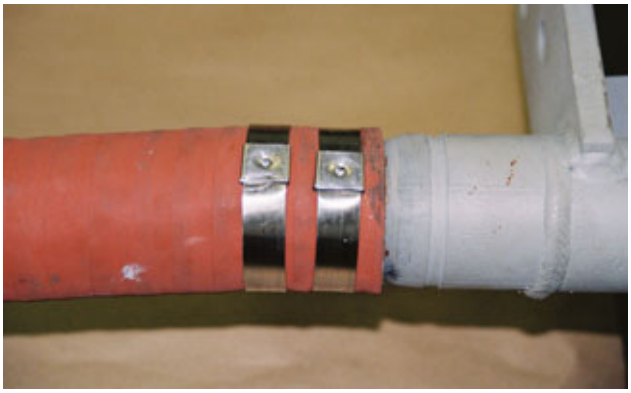


Apply thread sealer on hose end fittings and connect the extension hoses. Connect extension hose marked with AP@ to the vibrator motor hose marked with AP@ (pressure hose). Connect other extension (return) hose and tighten both securely. Connect Auto Vibe extension cable at this time if applicable.

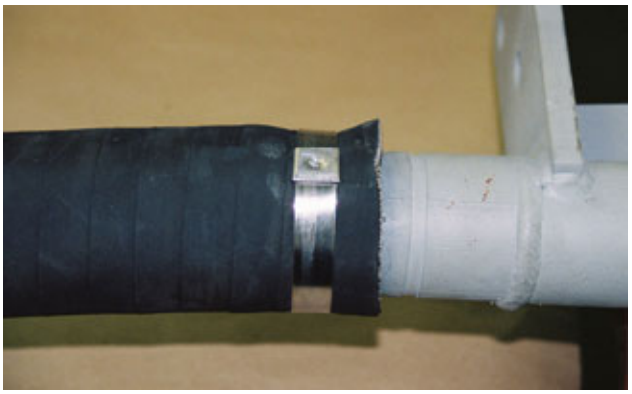
Apply #1 Permatex or equivalent sealer on the barbed end of the motor housing. Slide cover hose over the extension hoses (and cable) and completely over the barbs on the motor housing.



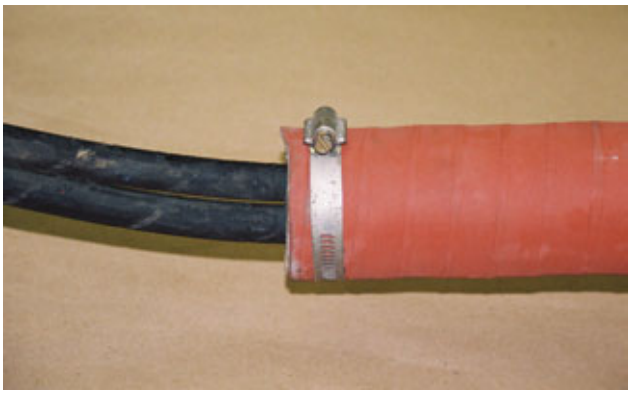
Install two band type hose clamps over the cover hose over the barbs and secure cover hose to motor tube following directions provided with clamp tool. Use only PunchLok type hose clamps in this position - screw type hose clamps interfere with the installation of the protective hose.



Slide protective hose over the cover hose until it is over the motor housing. Secure it in place with a single band type hose clamp. The protective hose is installed in a high wear area to protect the cover hose and attaching clamps.



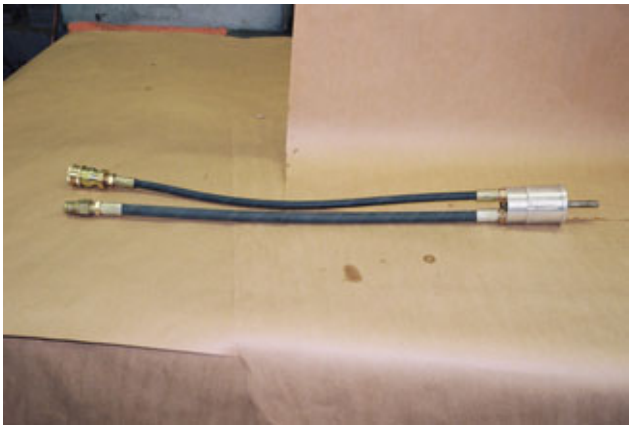
Install upper hose plug over the two hoses (and cable) and slide it into the cover hose until it is flush with the end. Secure tightly with a screw type hose clamp.



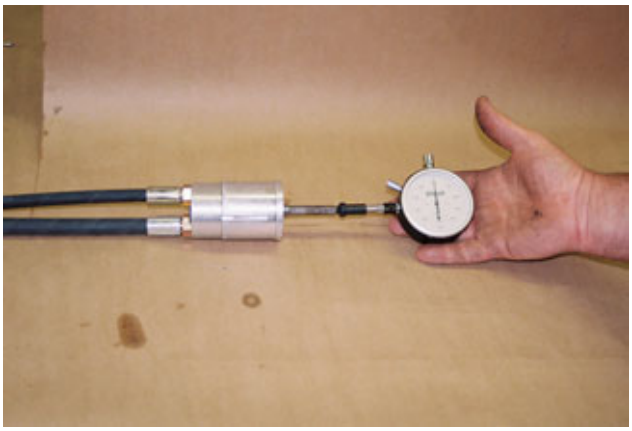
Apply thread sealer to hose end fittings and install appropriate quick disconnect fittings to extension hoses. Make sure that the quick disconnects are installed on the proper hoses. Incorrectly installed disconnects will make the motor run backwards. This can cause the motor shaft seal to fail and/or the vibrator eccentric head assembly to unscrew.

IV. Testing the vibrator motor or the complete vibrator assembly.

If the hydraulic motor is removed from the vibrator for any reason, it should be tested before being reinstalled in the vibrator. To test the motor one will require motor hoses and a set of quick disconnects. Make sure the proper motor hose and disconnect is installed on its respective motor port. Incorrectly installed hoses and/or disconnects will make the motor run backwards. This may result in a blown motor shaft seal and/or the eccentric head assembly to loosen up and eventually unscrew.



Connect the motor to a 4 g.p.m. hydraulic test stand and bring motor up to speed. Observe the output shaft rotation - it should be rotating counterclockwise as you look at the end of the shaft. Check the motor for leaks and repair them as necessary. With the help of a tachometer, check the revolutions per minute (rpm) of the motor. Bring the flow of the test stand up to 3.5 g.p.m. - the motor should run at about 10,200 rpm.



If a complete vibrator assembly is to be tested, it should be suspended in a container of water to cool the bearings in the eccentric tip assembly. Connect the vibrator assembly to a 4 g.p.m. hydraulic test stand or to a vibrator circuit on a machine.

The assembled vibrator should be tested for the maximum starting pressure required to operate the vibrator which is a maximum pressure of 200 psi.

Use the following procedure to test assembled vibrator.

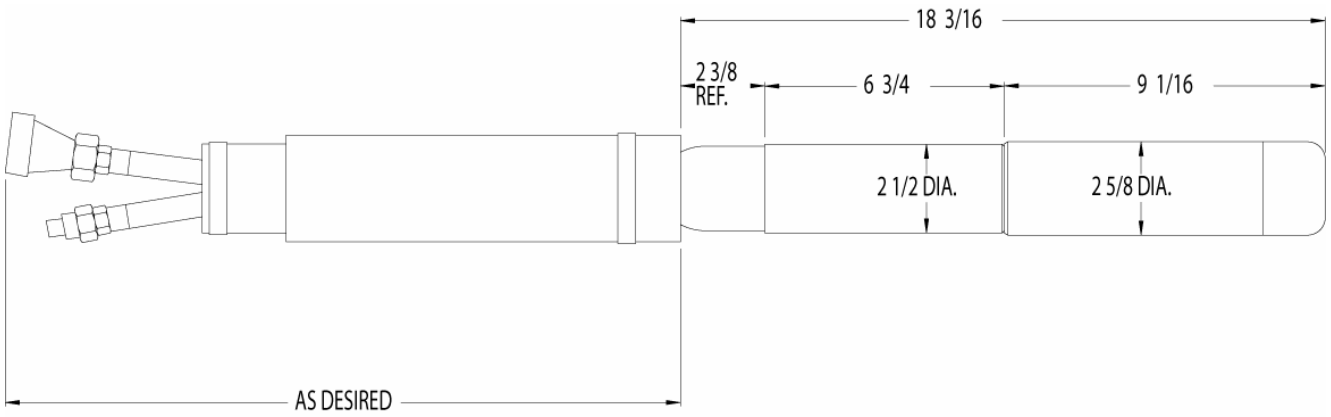
1. Start vibrator at ½ gpm
2. Slowly increase vibrator speed to 10,200 rpm. This should take 15-20 seconds. Check operating pressure. At 10,200 the flow should be about 3.75 gpm and the pressure between 750 psi and 850 psi.
3. While at that flow setting, start and stop vibrator 3 times.
4. Reduce flow setting to ½ gpm and start and stop vibrator 3 times. Observe pressure upon start up. It should not exceed 400 psi.
5. Increase vibrator speed to 10,200 rpm. Start and stop vibrator 3 times.

HV-2 Series Specifications

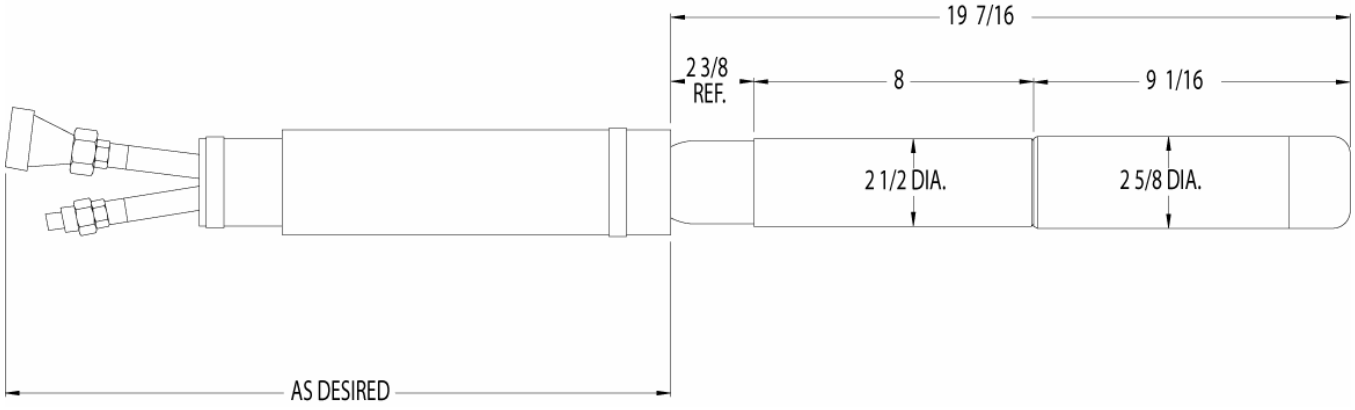
HEAD DIAMETER----------2-5/8" (66.67mm)
CENTRIFUGAL FORCE---------- 1902lbs. (8460.51N)
AMPLITUDE ----------0.126" (3.20mm)
DIAMETER OF INFLUENCE @ 10,500VPM ---------- 26.50"-30.50" (673.1mm-774.7mm)
DIAMETER OF INFLUENCE @ 8,000VPM---------- 20.25"-24.25" (514.3mm-615.9mm)
MAXIMUM FLOW ----------4GPM (15.14l/min)
NORMAL OPERATING PRESSURE----------800-1300PSI (5.51-8.96MPa)
BACK PRESSURE MAXIMUM ---------- 150PSI (1.03MPa)
RATED FOR PRESSURE UP TO 2500PSI (17.24MPa)

Specifications are nominal values and will vary depending on the size and range of aggregate and the slump of the concrete.
Specifications taken at 10,500VPM

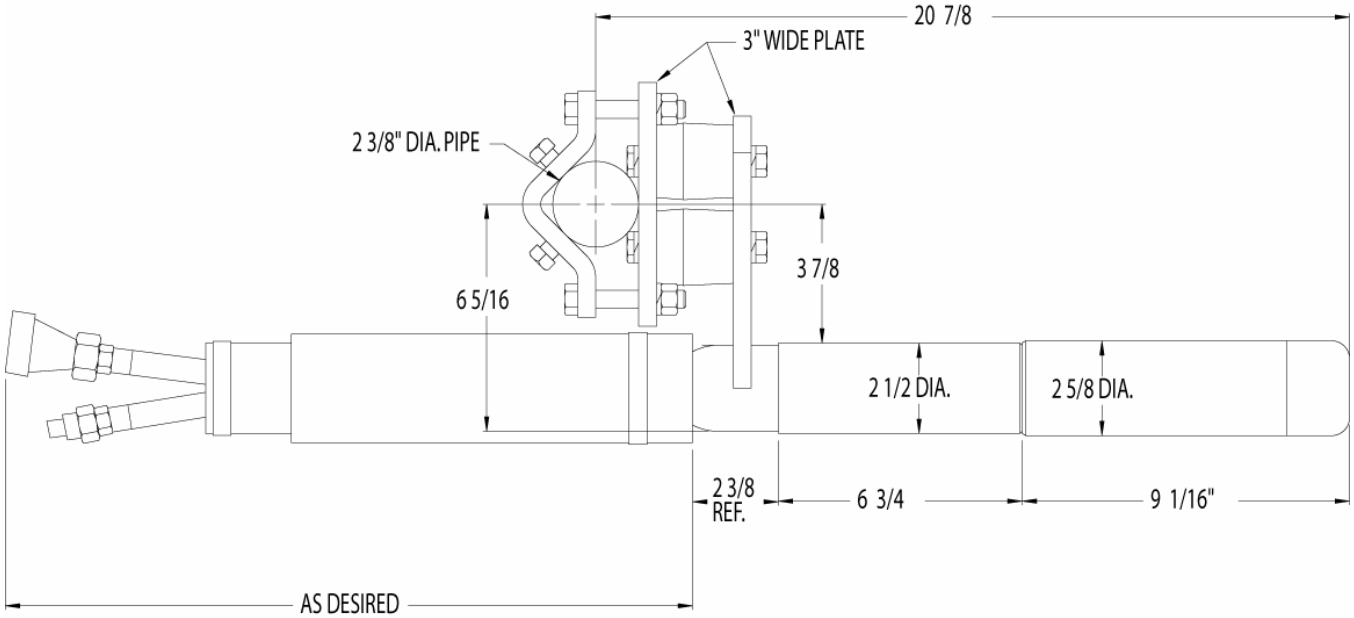
MODEL HV-2



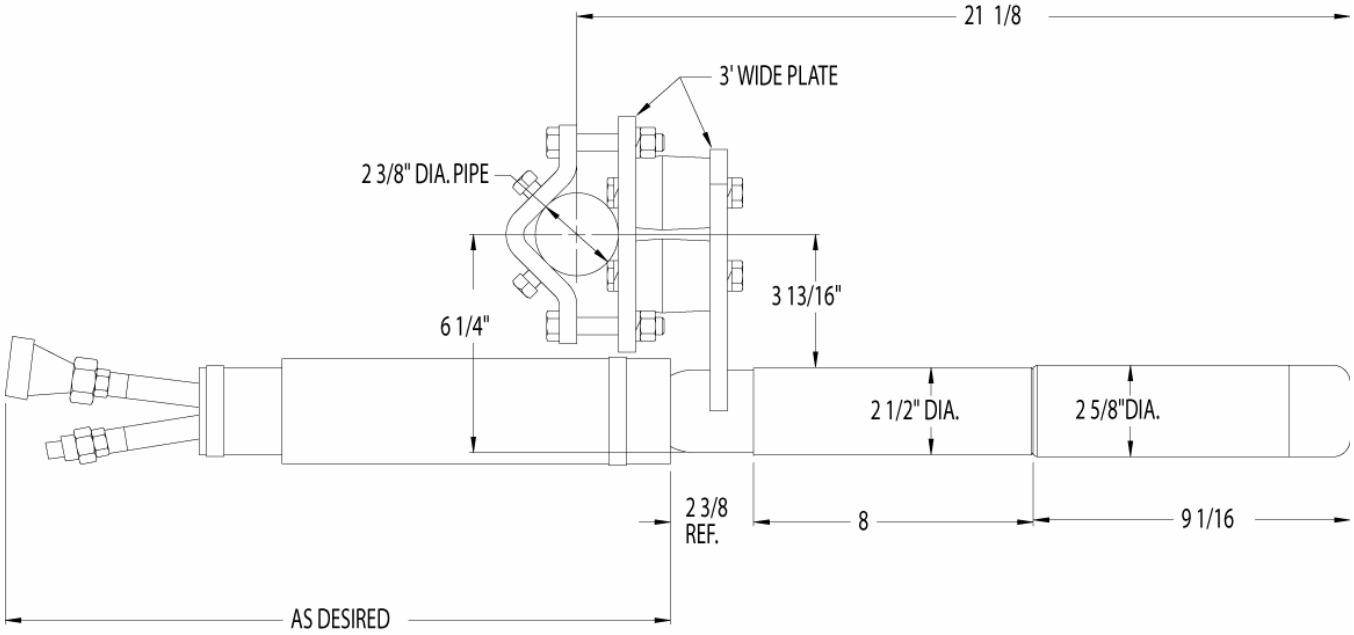
MODEL HV-2E



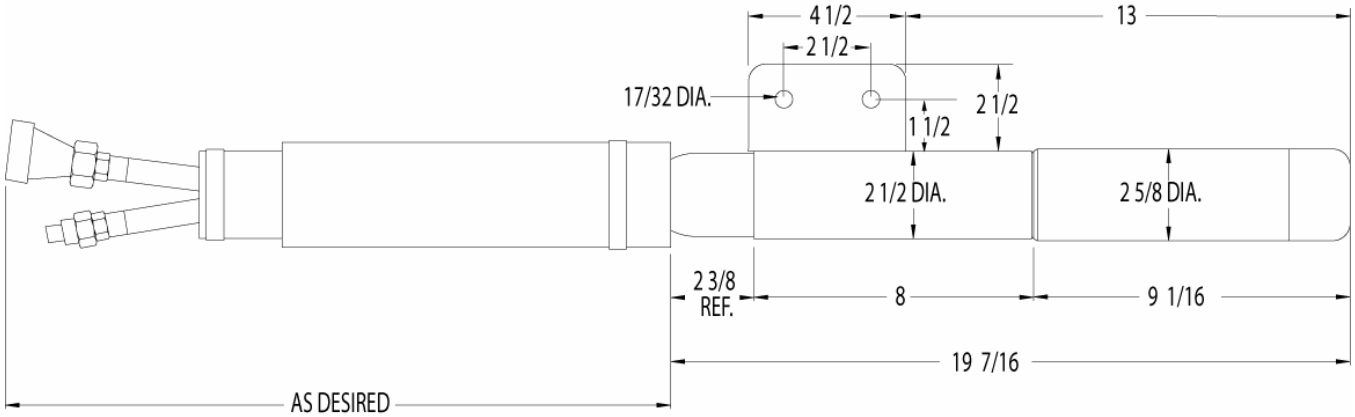
MODEL HV-2B



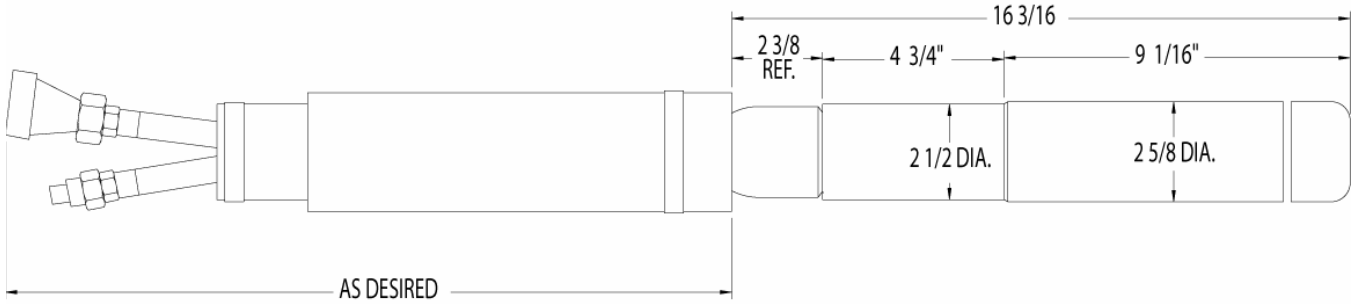
MODEL HV-2BE



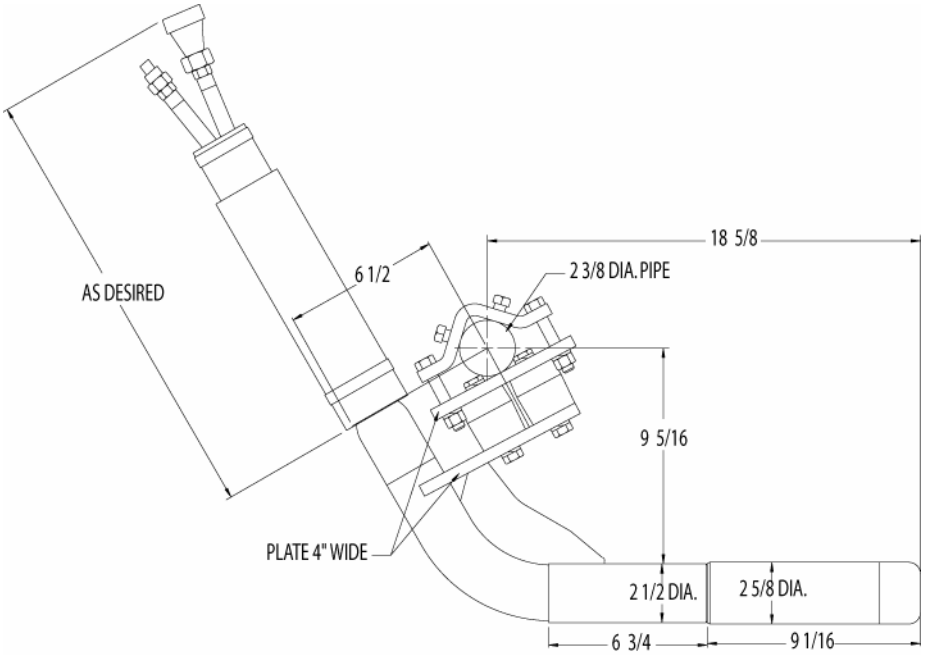
MODEL HV-2C



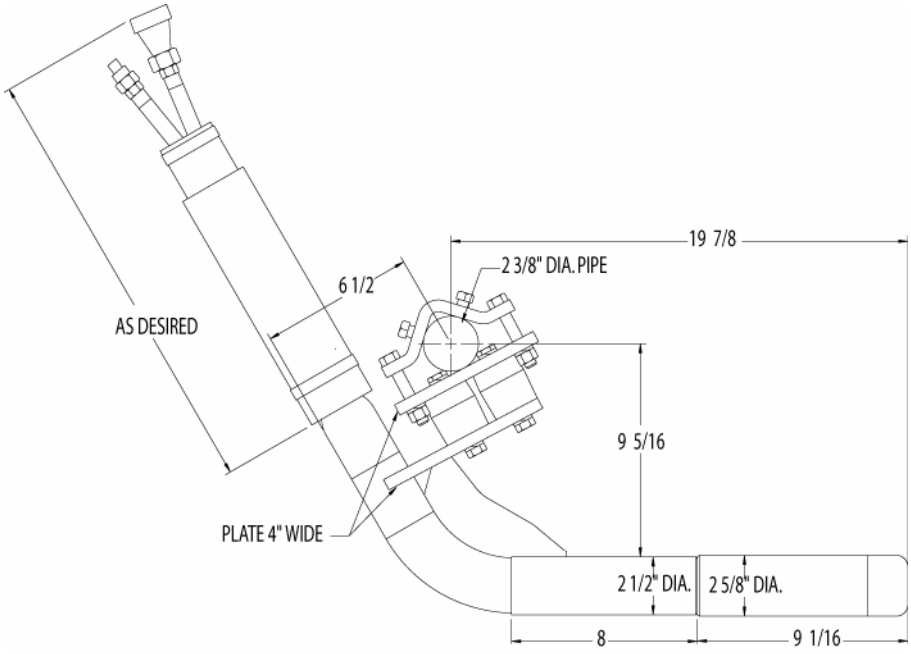
MODEL HV-2SM



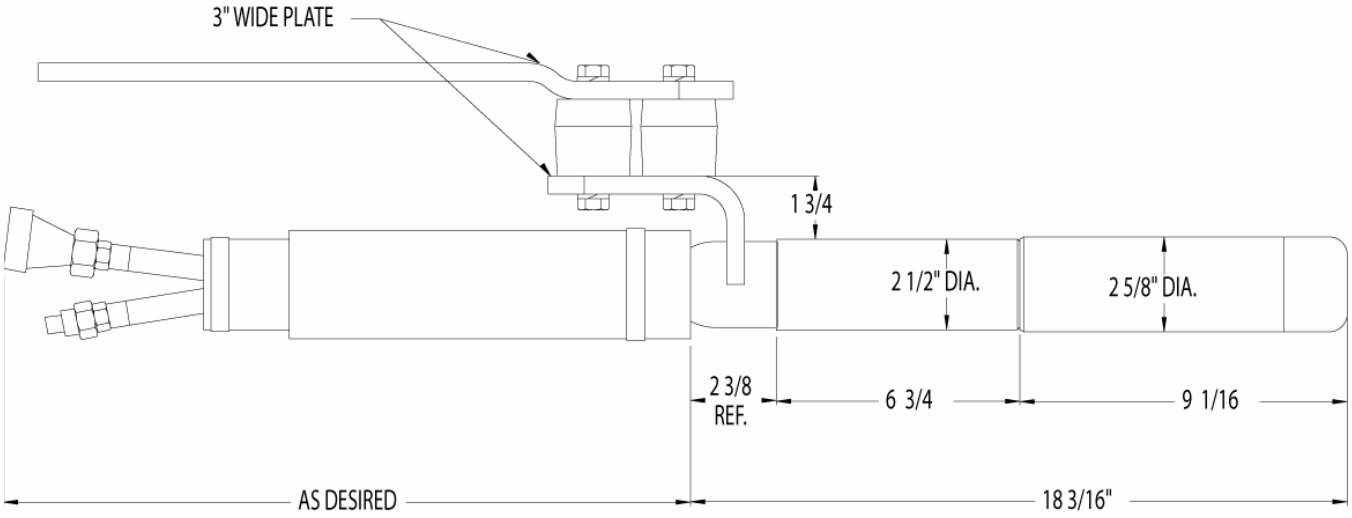
MODEL HV-2P



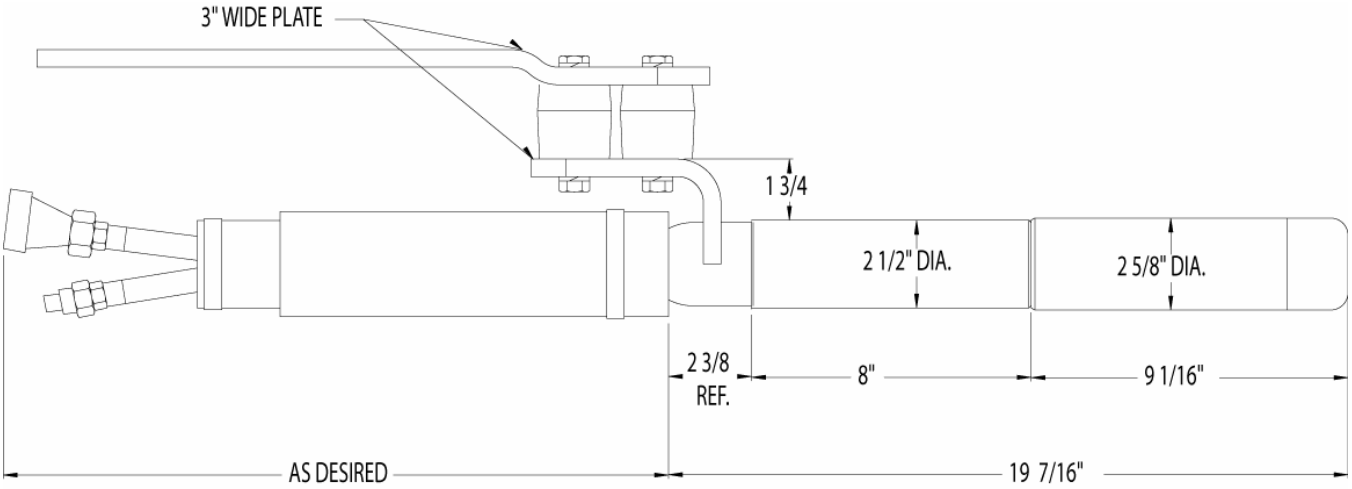
MODEL HV-2PE



MODEL HV-2S3



MODEL HV-2S3E

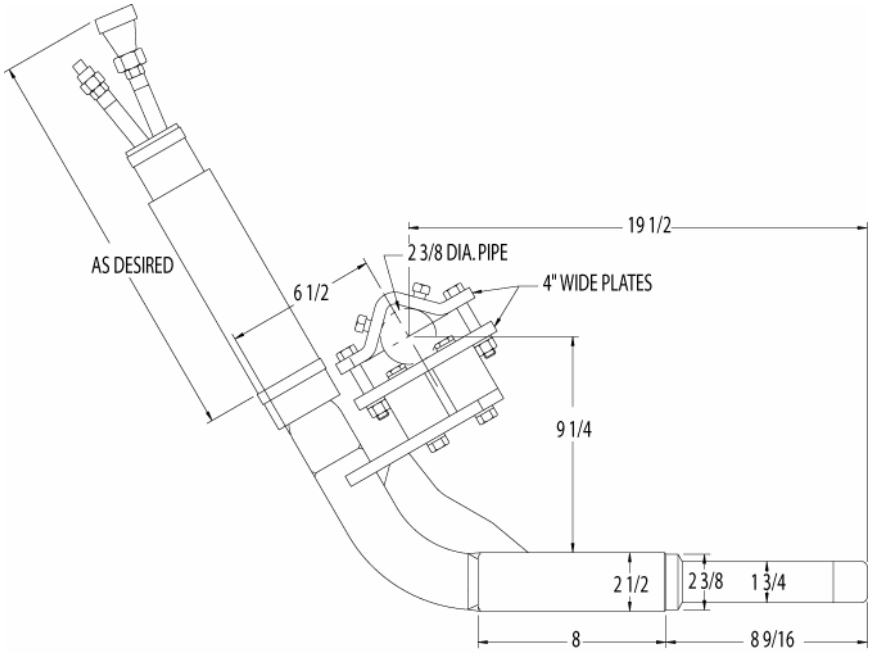


HV-3 Series Specifications

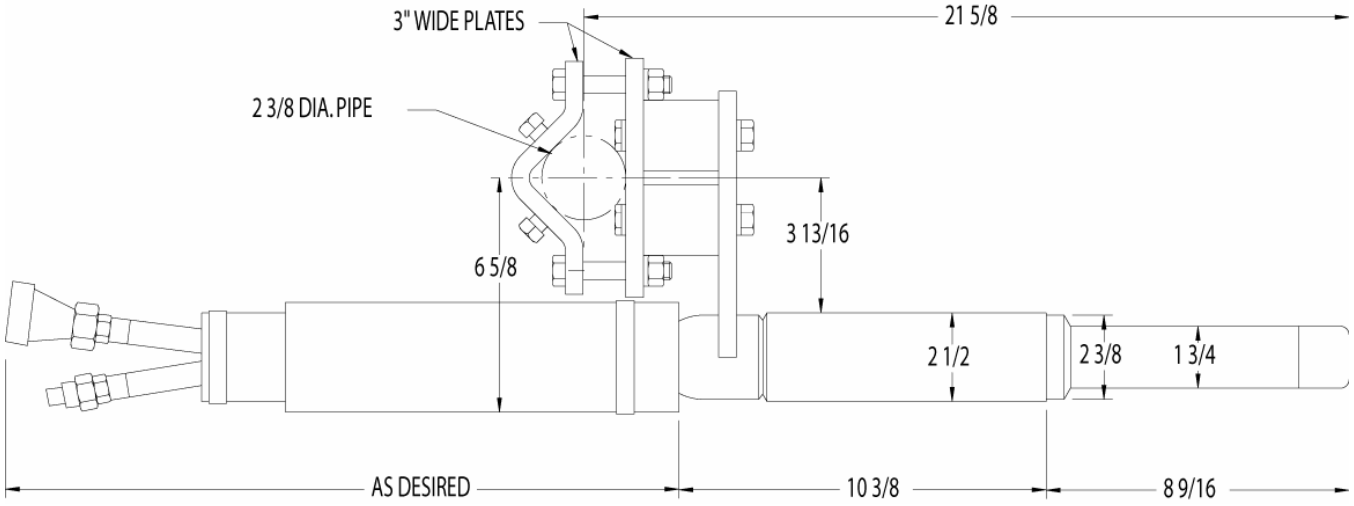
HEAD DIAMETER----------1-3/4” (44.45mm)
CENTRIFUGAL FORCE----------796lbs. (3540.78N)
AMPLITUDE----------0.040” (1.01mm)
DIAMETER OF INFLUENCE @ 10,500VPM---------- 11.00”-16.00” (279.4mm-406.4mm)
DIAMETER OF INFLUENCE @ 8,000VPM---------- 9.00”-13.00” (228.6mm-330.2mm)
MAXIMUM FLOW ----------4GPM (15.14l/min)
NORMAL OPERATING PRESSURE----------800-1300PSI (5.51-8.96MPa)
BACK PRESSURE MAXIMUM ---------- 150PSI (1.03MPa)
RATED FOR PRESSURE UP TO 2500PSI (17.24MPa)

Specifications are nominal values and will vary depending on the size and range of aggregate and the slump of the concrete.
Specifications taken at 10,500VPM

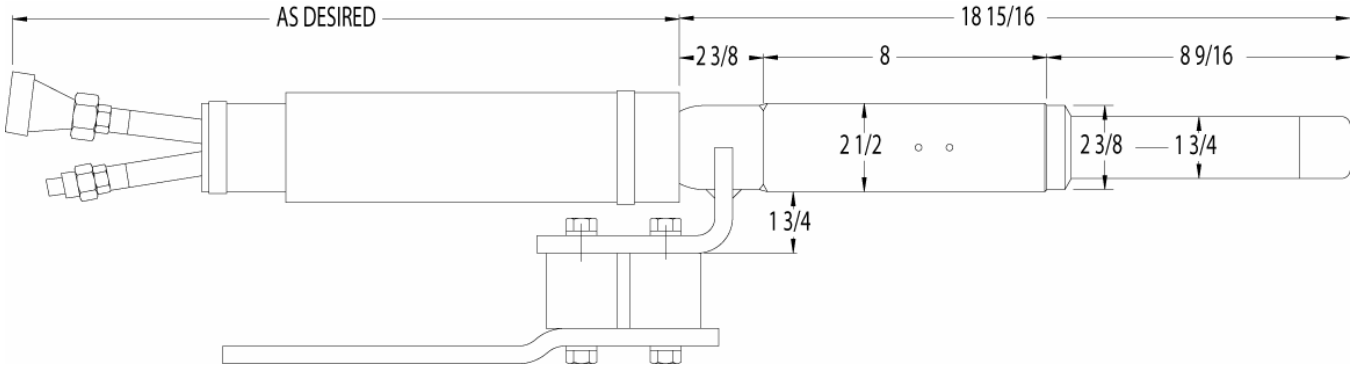
MODEL HV-3P



MODEL HV-3B



MODEL HV-3S1



HV-4 Series Specifications

HEAD DIAMETER----------3” (76.20mm)
CENTRIFUGAL FORCE---------- 2580lbs. (11476.41N)
AMPLITUDE----------0.127” (3.22mm)
DIAMETER OF INFLUENCE @ 10,500VPM---------- 32.00”-36.00” (812.8mm-914.4mm)
DIAMETER OF INFLUENCE @ 8,000VPM---------- 24.50”-28.50” (622.3mm-723.9mm)
MAXIMUM FLOW ----------4GPM (15.14l/min)
NORMAL OPERATING PRESSURE----------800-1300PSI (5.51-8.96MPa)
BACK PRESSURE MAXIMUM ---------- 150PSI (1.03MPa)
RATED FOR PRESSURE UP TO 2500PSI (17.24MPa)

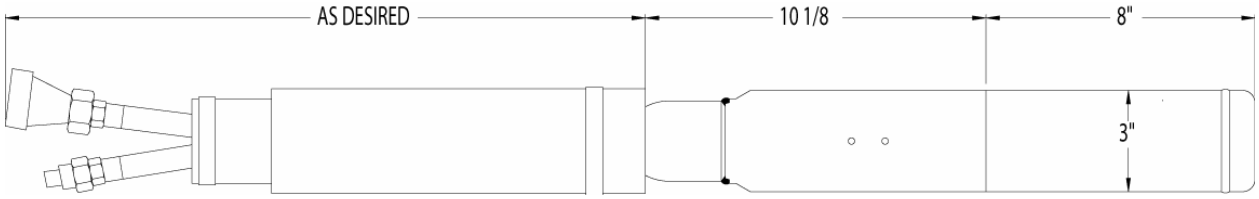
Specifications are nominal values and will vary depending on the size and range of aggregate and the slump of the concrete. Specifications taken at 10,500VPM

HV-4H Series Specifications

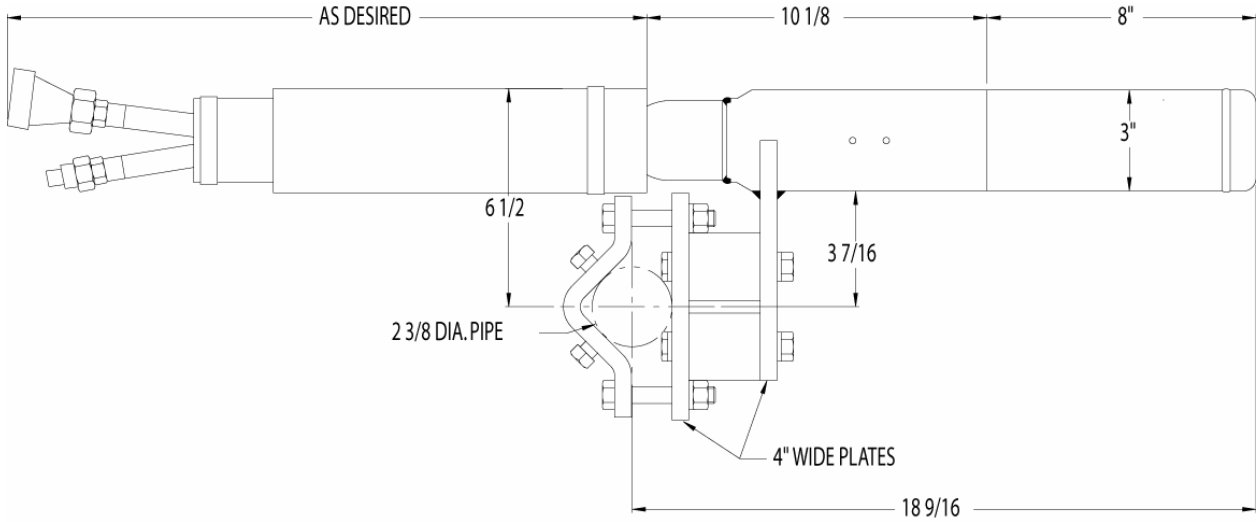
HEAD DIAMETER----------3” (76.20mm)
CENTRIFUGAL FORCE---------- 3102lbs. (13798.38N)
AMPLITUDE----------0.161” (4.08mm)
DIAMETER OF INFLUENCE @ 10,500VPM---------- 34.00”-36.00” (863.6mm-914.4mm)
DIAMETER OF INFLUENCE @ 8,000VPM---------- 26.50”-30.50” (673.1mm-774.7mm)
MAXIMUM FLOW ----------4GPM (15.14l/min)
NORMAL OPERATING PRESSURE----------800-1300PSI (5.51-8.96MPa)
BACK PRESSURE MAXIMUM ---------- 150PSI (1.03MPa)
RATED FOR PRESSURE UP TO 2500PSI (17.24MPa)

Specifications are nominal values and will vary depending on the size and range of aggregate and the slump of the concrete. Specifications taken at 10,500VPM

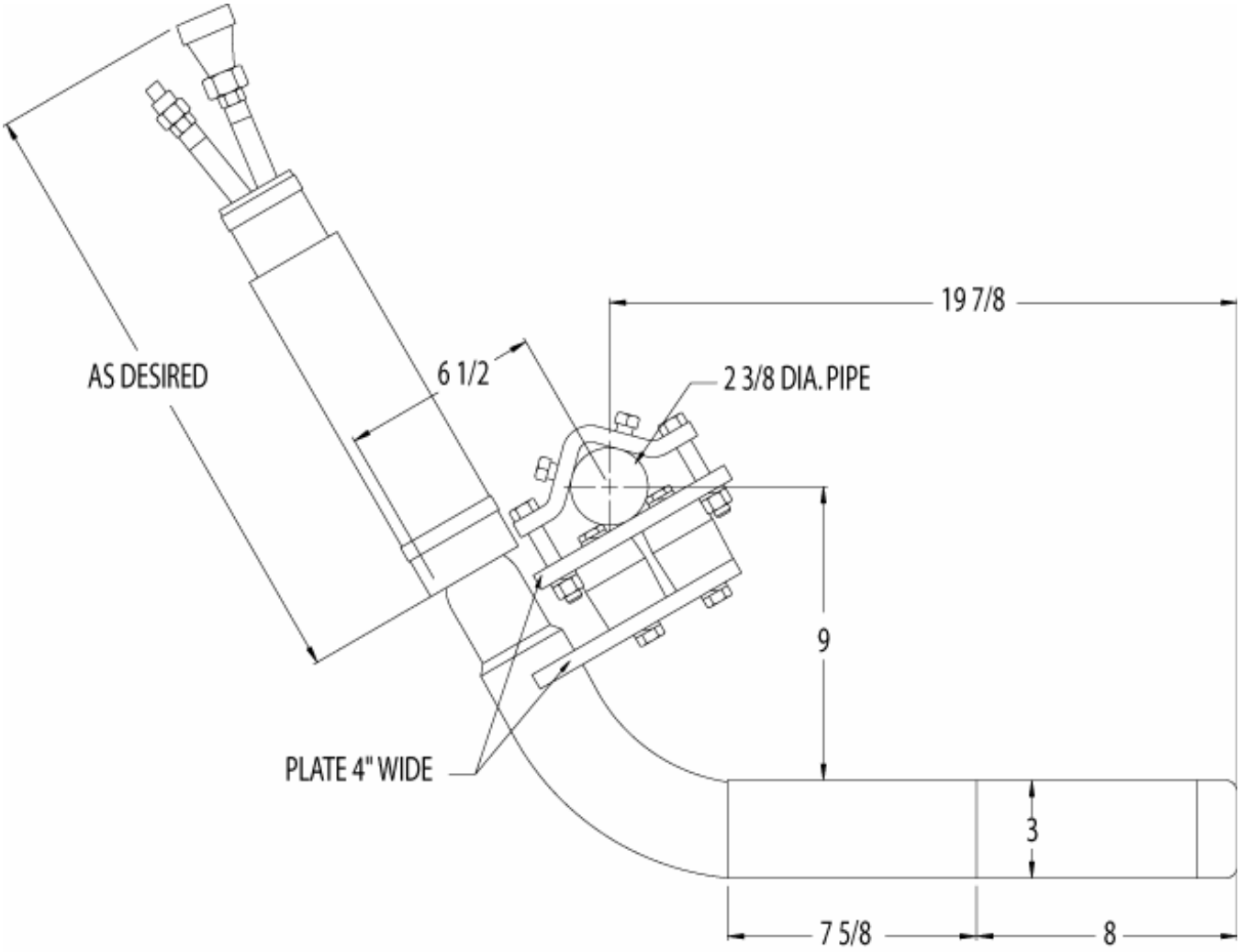
MODEL HV-4 / HV-4H



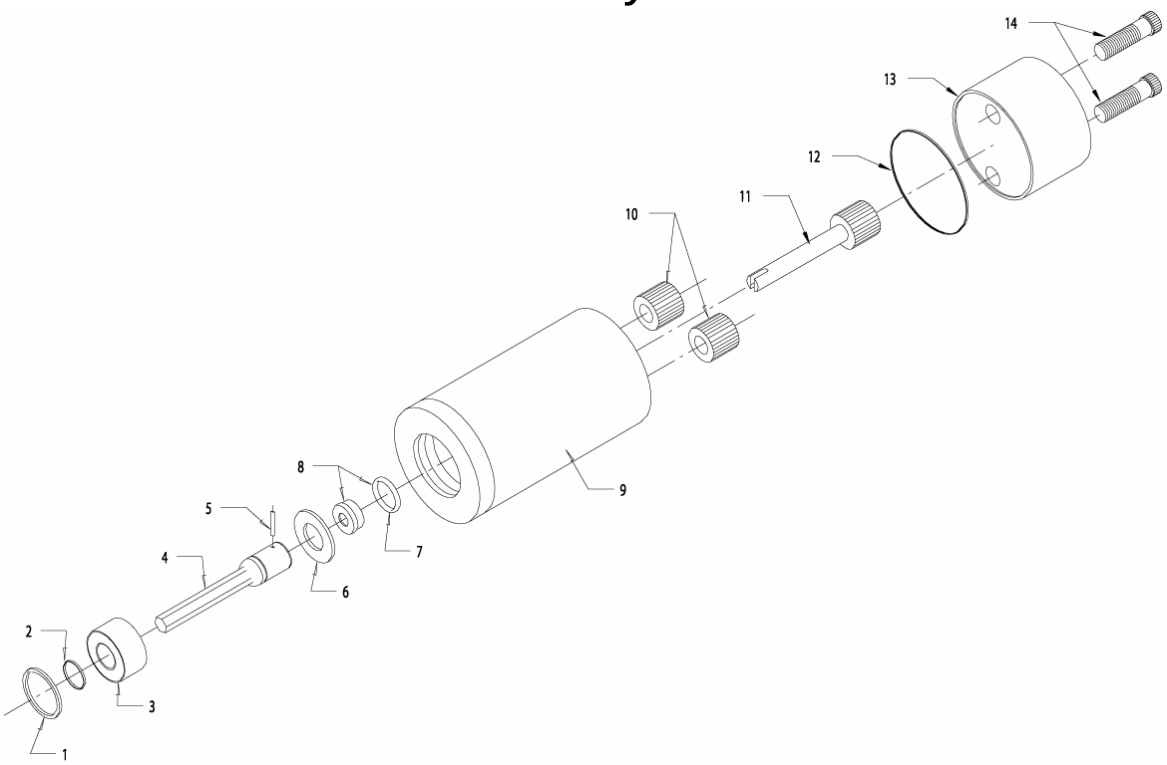
MODEL HV-4B / HV-4BH



MODEL HV-4P / HV-4PH



0A1225-00000 Hydraulic Motor



ITEM	PART #	DESCRIPTION	QTY
1	001700-00000	RETAINING RING	1
*2	001702-00000	RETAINING RING	1
*3	001703-00000	BEARING	1
4	001730-00000	DRIVE SHAFT	1
*5	017011-00000	DRIVE SHAFT PIN	1
*6	001729-00000	MACHINED WASHER	1
7	001740-00000	O-RING	1
*8	0A1745-00000	SEAL ASSEMBLY	1
9	0A1706-00000	UPPER MOTOR HOUSING ASSEMBLY	1
10	001708-00000	IDLER GEAR	2
11	001742-00000	DRIVE GEAR	1
*12	001710-00000	O-RING	1
13	0A1711-00000	END CAP ASSEMBLY	1
14	006216-1.500	ALLEN HEAD CAP SCREW	2

***INCLUDED IN VIBRATOR REPAIR KIT for HV-2 Series 0A1752-00000**
***INCLUDED IN VIBRATOR REPAIR KIT for HV-4 Series 0A1753-00000**

Vibrator Repair Kit for HV-2 Series 0A1752-00000

PART #	DESCRIPTION	QTY
000652-00000	BEARING LOCKWASHER	2
00A653-00000	ECCENTRIC BEARING KIT	2
001702-00000	RETAINING RING	1
001703-00000	BEARING	1
001710-00000	END CAP O-RING	1
001729-00000	MACHINED WASHER SEAL	1
017011-00000	DRIVE SHAFT PIN	1
0A1745-00000	O-RING HOUSING & SEAL ASSEMBLY	1

2-5/8” Diameter Hydraulic Concrete Vibrator

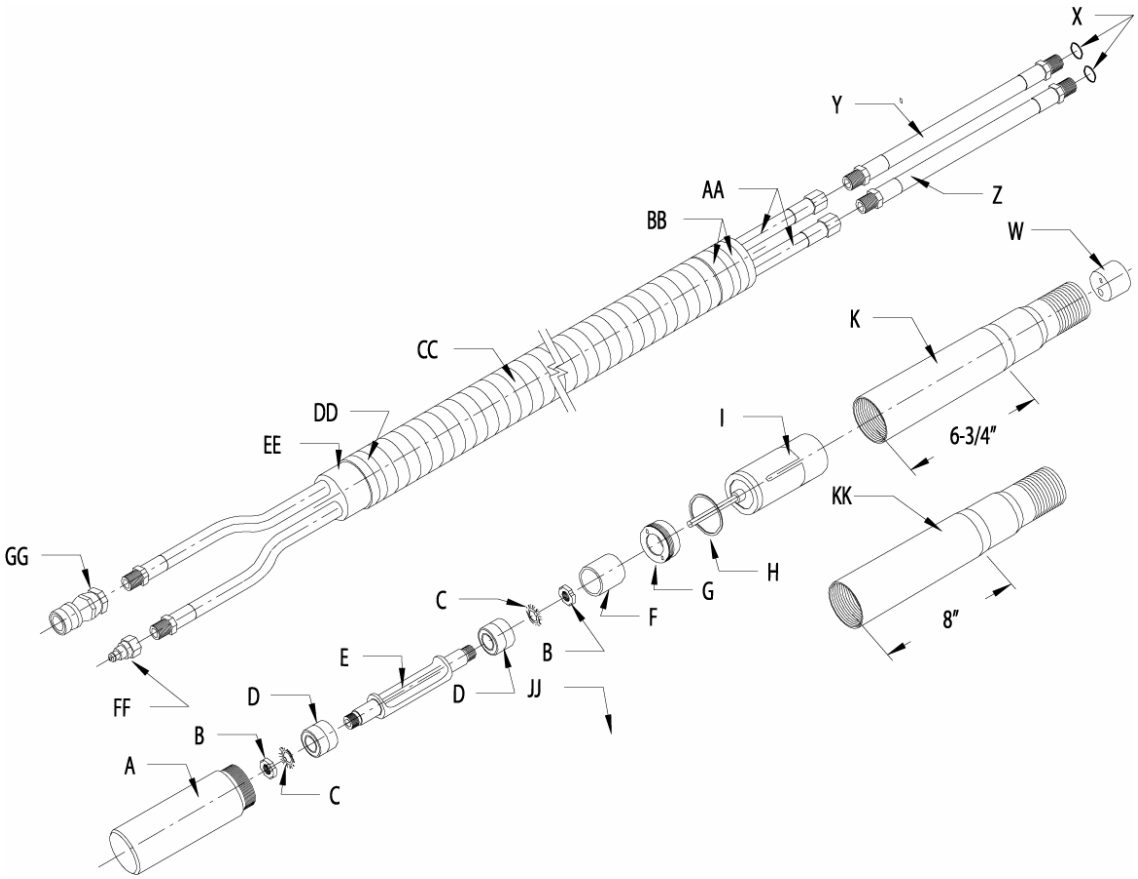
HV-2 HV-2E

ITEM	PART #	DESCRIPTION	QTY
A	00A751-00000	ECCENTRIC HOUSING	1
B	000651-00000	BEARING LOCK NUT	2
*C	000652-00000	LOCKWASHER	2
*D	00A653-00000	ECCENTRIC BEARING KIT	2
E	006541-00000	ECCENTRIC WEIGHT (HV-2 & HV-2E)	1
F	000655-00000	ECCENTRIC BEARING HOUSING	1
G	001226-00000	MOTOR LOCKNUT	1
H	001236-00000	O-RING	1
I	0A1225-00000	HYDRAULIC MOTOR	1
K	0A1229-00002	HYD MOTOR HOUSING (HV-2)	1
W	001253-00000	STOPPER	1
X	001234-00000	O-RING	2
Y	0A1230-00021	HYD MOTOR HOSE - PRESSURE 1/4”	1
Z	0A1255-00021	HYD MOTOR HOSE- RETURN 3/8”	1
AA	0A1212-0000?	HYD HOSE - SPECIFY LENGTH IN INCHES	2
BB	001218-00000	HOSE CLAMP	2
CC	001214-00000	COVER HOSE - SPECIFY LENGTH IN INCHES	
DD	001219-00000	HOSE CLAMP	1
EE	001215-00000	PLUG	1
FF	001217-00000	MALE DISCONNECT	1
GG	001216-00000	FEMAIL DISCONNECT	1
KK	0A1229-00000	HYD MOTOR HOUSING (HV-2E)	1

*INCLUDED IN VIBRATOR REPAIR KIT 0A1752-00000

2-5/8” Diameter Hydraulic Concrete Vibrator

HV-2 HV-2E



2-5/8” Diameter Hydraulic Concrete Vibrator

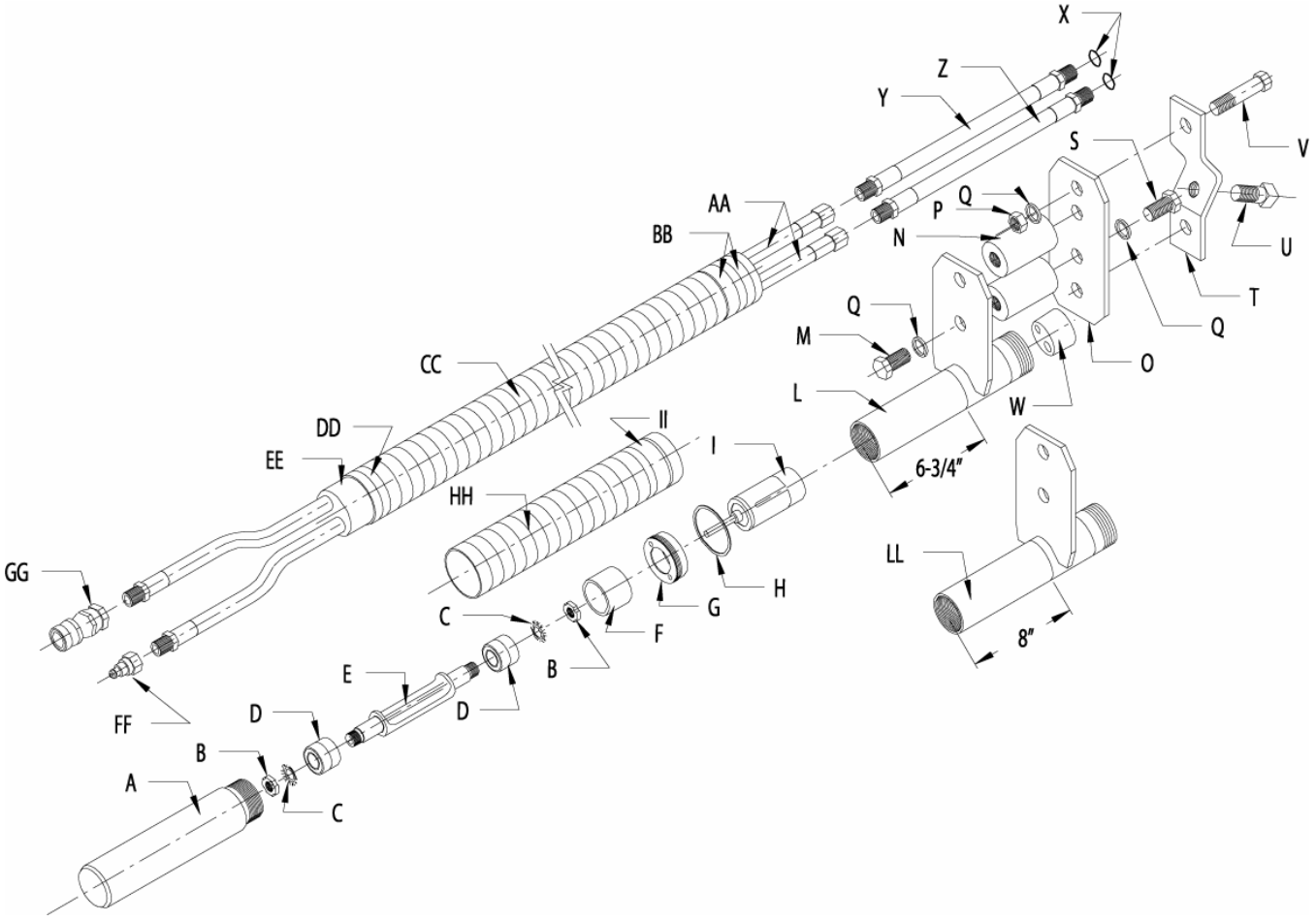
HV-2B HV-2BE

ITEM	PART #	DESCRIPTION	QTY
A	00A751-00000	ECCENTRIC HOUSING	1
B	000651-00000	BEARING LOCK NUT	2
*C	000652-00000	LOCKWASHER	2
*D	00A653-00000	ECCENTRIC BEARING KIT	2
E	006541-00000	ECCENTRIC WEIGHT (HV-2B & HV-2BE)	1
F	000655-00000	ECCENTRIC BEARING HOUSING	1
G	001226-00000	MOTOR LOCKNUT	1
H	001236-00000	O-RING	1
I	0A1225-00000	HYDRAULIC MOTOR	1
L	0A1228-00001	HYD MOTOR HOUSING (HV-2B)	1
M	006040-1.000	H.H. CAP SCREW 1/2”-13 X 1.00”	2
N	001206-00000	ISOLATOR	2
O	001207-00000	MOUNTING BRACKET	1
P	006074-00000	HEX NUT 1/2”-13	2
Q	006151-00000	LOCKWASHER 1/2”	6
S	001208-00000	H.H. CAP SCREW - SPECIAL	2
T	000678-00000	MOUNTING CLAMP	1
U	006288-0.750	SET SCREW 1/2”-13 X 0.75”	2
V	006040-3.000	H.H. CAP SCREW 1/2”-13 X 3.00”	2
W	001253-00000	STOPPER	1
X	001234-00000	O-RING	2
Y	0A1230-00021	HYD MOTOR HOSE - PRESSURE 1/4”	1
Z	0A1255-00021	HYD MOTOR HOSE- RETURN 3/8”	1
AA	0A1212-0000?	HYD HOSE - SPECIFY LENGTH IN INCHES	2
BB	001218-00000	HOSE CLAMP	2
CC	001214-00000	COVER HOSE - SPECIFY LENGTH IN INCHES	
DD	001219-00000	HOSE CLAMP	1
EE	001215-00000	PLUG	1
FF	001217-00000	MALE DISCONNECT	1
GG	001216-00000	FEMAIL DISCONNECT	1
HH	001233-00000	PROTECTOR HOSE	12”
II	001235-00000	HOSE CLAMP	1
LL	0A1228-00000	HYD MOTOR HOUSING (HV-2BE)	1

*INCLUDED IN VIBRATOR REPAIR KIT 0A1752-00000

2-5/8” Diameter Hydraulic Concrete Vibrator

HV-2B HV-2BE



2-5/8” Diameter Hydraulic Concrete Vibrator

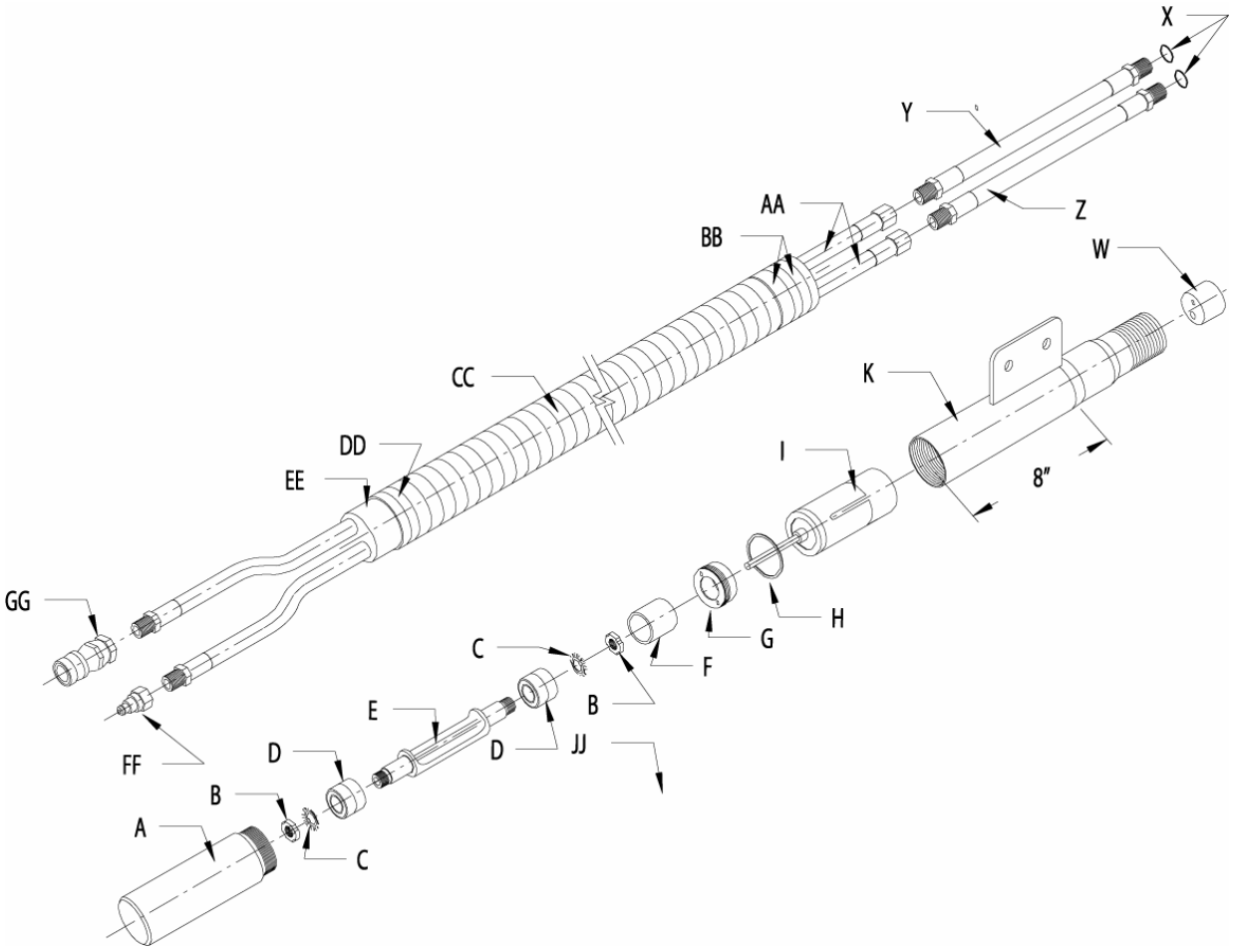
HV-2C

ITEM	PART #	DESCRIPTION	QTY
A	00A751-00000	ECCENTRIC HOUSING	1
B	000651-00000	BEARING LOCK NUT	2
*C	000652-00000	LOCKWASHER	2
*D	00A653-00000	ECCENTRIC BEARING KIT	2
E	006541-00000	ECCENTRIC WEIGHT	1
F	000655-00000	ECCENTRIC BEARING HOUSING	1
G	001226-00000	MOTOR LOCKNUT	1
H	001236-00000	O-RING	1
I	0A1225-00000	HYDRAULIC MOTOR	1
K	0A8576-00000	HYD MOTOR HOUSING	1
W	001253-00000	STOPPER	1
X	001234-00000	O-RING	2
Y	0A1230-00021	HYD MOTOR HOSE - PRESSURE 1/4”	1
Z	0A1255-00021	HYD MOTOR HOSE- RETURN 3/8”	1
AA	0A1212-0000?	HYD HOSE - SPECIFY LENGTH IN INCHES	2
BB	001218-00000	HOSE CLAMP	2
CC	001214-00000	COVER HOSE - SPECIFY LENGTH IN INCHES	
DD	001219-00000	HOSE CLAMP	1
EE	001215-00000	PLUG	1
FF	001217-00000	MALE DISCONNECT	1
GG	001216-00000	FEMAIL DISCONNECT	1

***INCLUDED IN VIBRATOR REPAIR KIT 0A1752-00000**

2-5/8” Diameter Hydraulic Concrete Vibrator

HV-2C



2-5/8” Diameter Hydraulic Concrete Vibrator

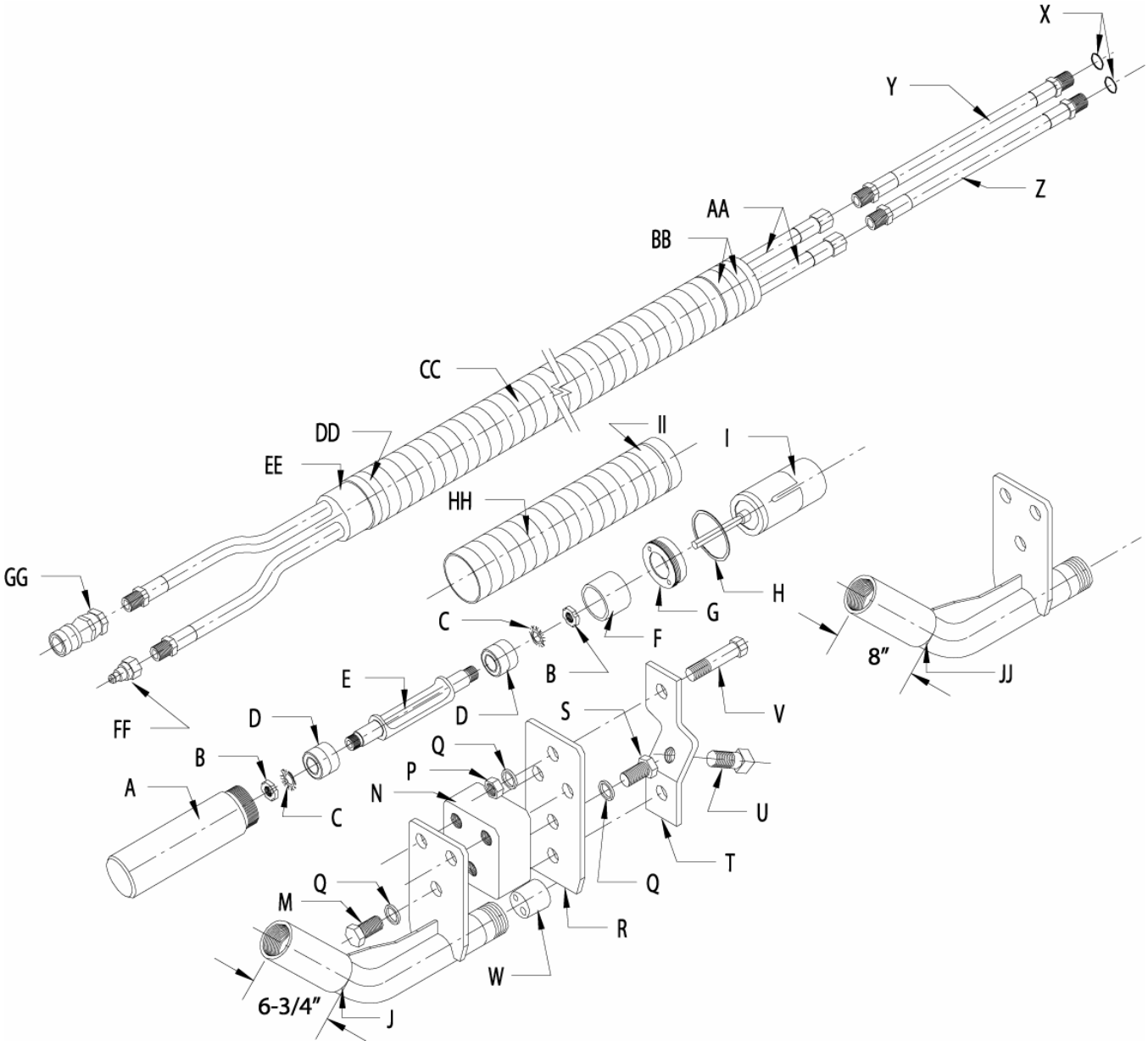
HV-2P HV-2PE

ITEM	PART #	DESCRIPTION	QTY
A	00A751-00000	ECCENTRIC HOUSING	1
B	000651-00000	BEARING LOCK NUT	2
*C	000652-00000	LOCKWASHER	2
*D	00A653-00000	ECCENTRIC BEARING KIT	2
E	006541-00000	ECCENTRIC WEIGHT (HV-2P & HV-2PE)	1
F	000655-00000	ECCENTRIC BEARING HOUSING	1
G	001226-00000	MOTOR LOCKNUT	1
H	001236-00000	O-RING	1
I	0A1225-00000	HYDRAULIC MOTOR	1
J	0A1227-00006	HYD MOTOR HOUSING (HV-2P)	1
M	006040-1.000	H.H. CAP SCREW 1/2”-13 X 1.00”	3
N	001206-00002	ISOLATOR	1
P	006074-00000	HEX NUT 1/2”-13	2
Q	006151-00000	LOCKWASHER 1/2”	8
R	001211-00000	MOUNTING BRACKET HV2P/PE	1
S	001208-00000	H.H. CAP SCREW - SPECIAL	3
T	000678-00000	MOUNTING CLAMP	1
U	006288-0.750	SET SCREW 1/2”-13 X 0.75”	2
V	006040-3.000	H.H. CAP SCREW 1/2”-13 X 3.00”	2
W	001253-00000	STOPPER	1
X	001234-00000	O-RING	2
Y	0A1230-00021	HYD MOTOR HOSE - PRESSURE 1/4”	1
Z	0A1255-00021	HYD MOTOR HOSE- RETURN 3/8”	1
AA	0A1212-0000?	HYD HOSE - SPECIFY LENGTH IN INCHES	2
BB	001218-00000	HOSE CLAMP	2
CC	001214-00000	COVER HOSE - SPECIFY LENGTH IN INCHES	
DD	001219-00000	HOSE CLAMP	1
EE	001215-00000	PLUG	1
FF	001217-00000	MALE DISCONNECT	1
GG	001216-00000	FEMAIL DISCONNECT	1
HH	001233-00000	PROTECTOR HOSE	12”
II	001235-00000	HOSE CLAMP	1
JJ	0A1227-00001	HYD MOTOR HOUSING (HV-2PE)	1

*INCLUDED IN VIBRATOR REPAIR KIT 0A1752-00000

2-5/8” Diameter Hydraulic Concrete Vibrator

HV-2P HV-2PE



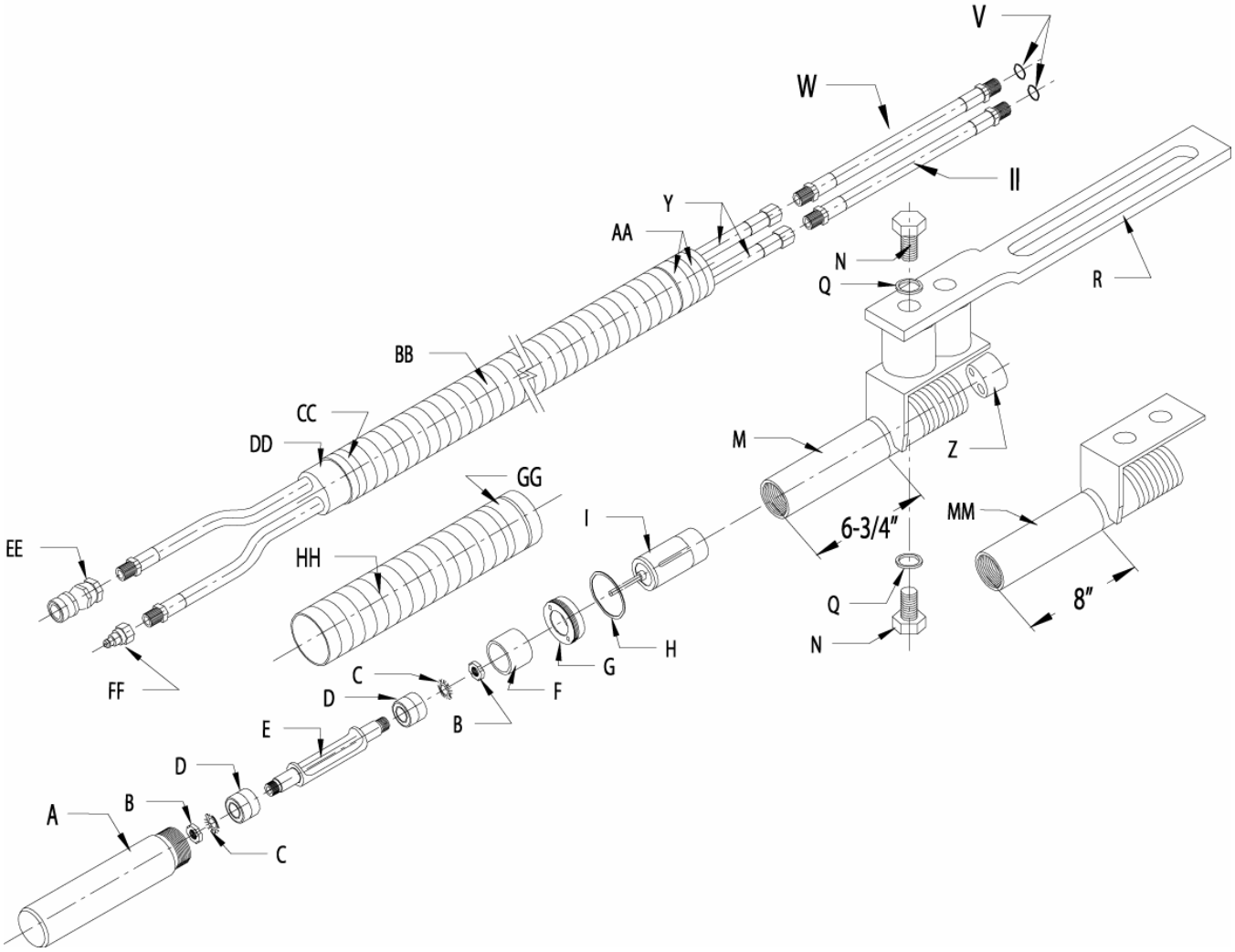
HV-2S3 HV-2S3E

ITEM	PART #	DESCRIPTION	QTY
A	00A751-00000	ECCENTRIC HOUSING	1
B	000651-00000	BEARING LOCK NUT	2
*C	000652-00000	LOCKWASHER	2
*D	00A653-00000	ECCENTRIC BEARING KIT	2
E	006541-00000	ECCENTRIC WEIGHT (HV-2S3 & HV-2S3E)	1
F	000655-00000	ECCENTRIC BEARING HOUSING	1
G	001226-00000	MOTOR LOCKNUT	1
H	001236-00000	O-RING	1
I	0A1225-00000	HYDRAULIC MOTOR	1
M	0A1257-00006	HYD MOTOR HOUSING (HV-2S3)	1
N	006040-1.000	H.H. CAP SCREW 1/2”-13 X 1.00”	4
O	001206-00000	ISOLATOR	2
Q	006151-00000	LOCKWASHER 1/2”	4
R	A12464-00000	MOUNTING BRACKET	1
V	001234-00000	O-RING	2
W	0A1230-00021	HYD MOTOR HOSE - PRESSURE 1/4”	1
Y	0A1212-0000?	HYD HOSE - SPECIFY LENGTH IN INCHES	2
Z	001253-00000	STOPPER	1
AA	001218-00000	HOSE CLAMP	2
BB	001214-00000	COVER HOSE - SPECIFY LENGTH IN INCHES	
CC	001219-00000	HOSE CLAMP	1
DD	001215-00000	PLUG	1
EE	001216-00000	FEMAIL DISCONNECT	1
FF	001217-00000	MALE DISCONNECT	1
GG	001235-00000	HOSE CLAMP	1
HH	001233-00000	PROTECTOR HOSE	12”
II	0A1255-00021	HYD MOTOR HOSE - RETURN 3/8”	1
MM	0A1257-00000	HYD MOTOR HOUSING (HV-2S3E)	1

*INCLUDED IN VIBRATOR REPAIR KIT 0A1752-00000

2-5/8” Diameter Hydraulic Concrete Vibrator

HV-2S3 HV-2S3E



2-5/8” Diameter Hydraulic Concrete Vibrator

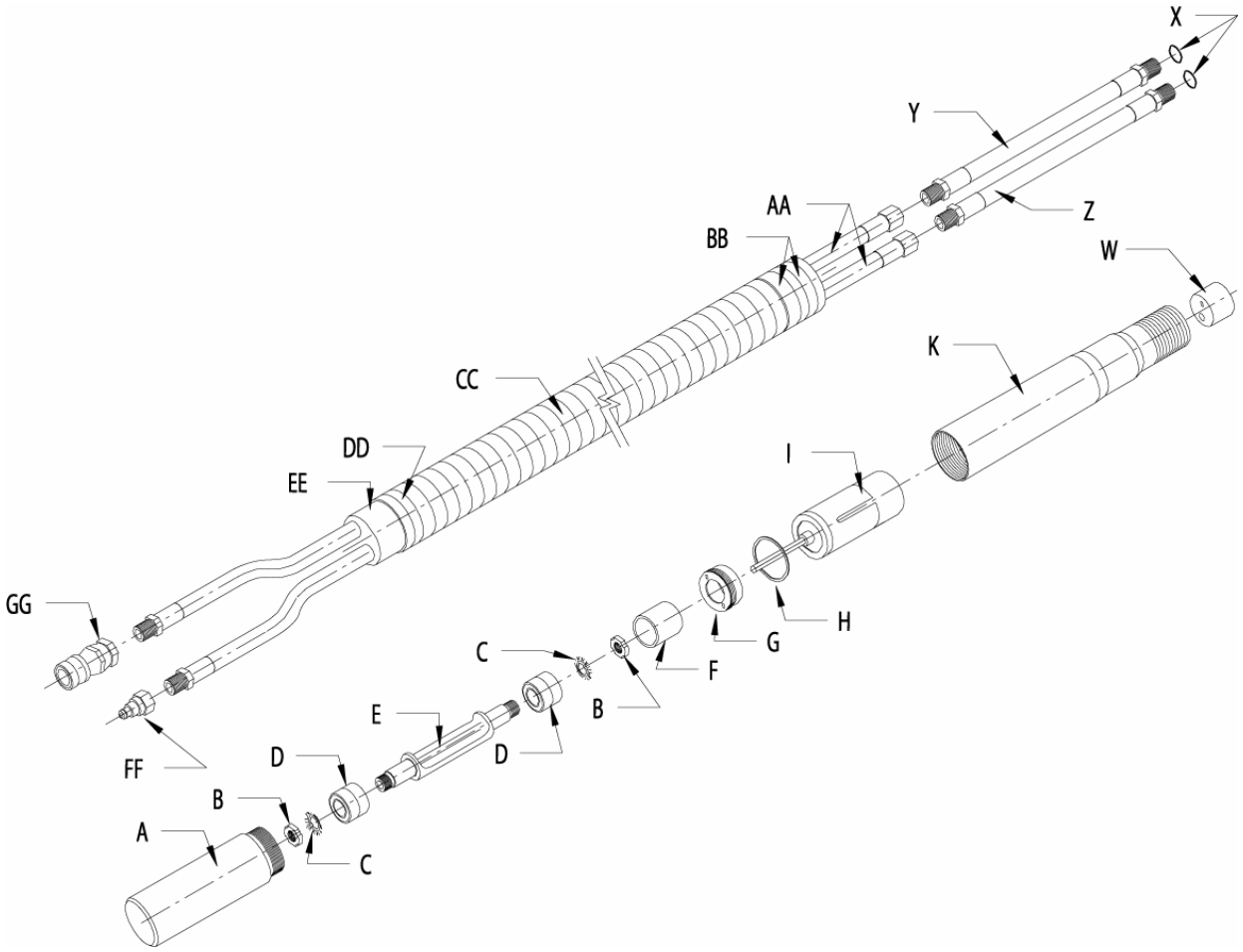
HV-2SM HV-2SM

ITEM	PART #	DESCRIPTION	QTY
A	00A751-00000	ECCENTRIC HOUSING	1
B	000651-00000	BEARING LOCK NUT	2
*C	000652-00000	LOCKWASHER	2
*D	00A653-00000	ECCENTRIC BEARING KIT	2
E	006541-00000	ECCENTRIC WEIGHT	1
F	000655-00000	ECCENTRIC BEARING HOUSING	1
G	001226-00000	MOTOR LOCKNUT	1
H	001236-00000	O-RING	1
I	0A1225-00000	HYDRAULIC MOTOR	1
K	0A1315-00000	HYD MOTOR HOUSING	1
W	001253-00000	STOPPER	1
X	001234-00000	O-RING	2
Y	0A1230-00021	HYD MOTOR HOSE - PRESSURE 1/4”	1
Z	0A1255-00021	HYD MOTOR HOSE- RETURN 3/8”	1
AA	0A1212-0000?	HYD HOSE - SPECIFY LENGTH IN INCHES	2
BB	001218-00000	HOSE CLAMP	2
CC	001214-00000	COVER HOSE - SPECIFY LENGTH IN INCHES	
DD	001219-00000	HOSE CLAMP	1
EE	001215-00000	PLUG	1
FF	001217-00000	MALE DISCONNECT	1
GG	001216-00000	FEMAIL DISCONNECT	1

***INCLUDED IN VIBRATOR REPAIR KIT 0A1752-00000**

2-5/8” Diameter Hydraulic Concrete Vibrator

HV-2SM HV-2SM



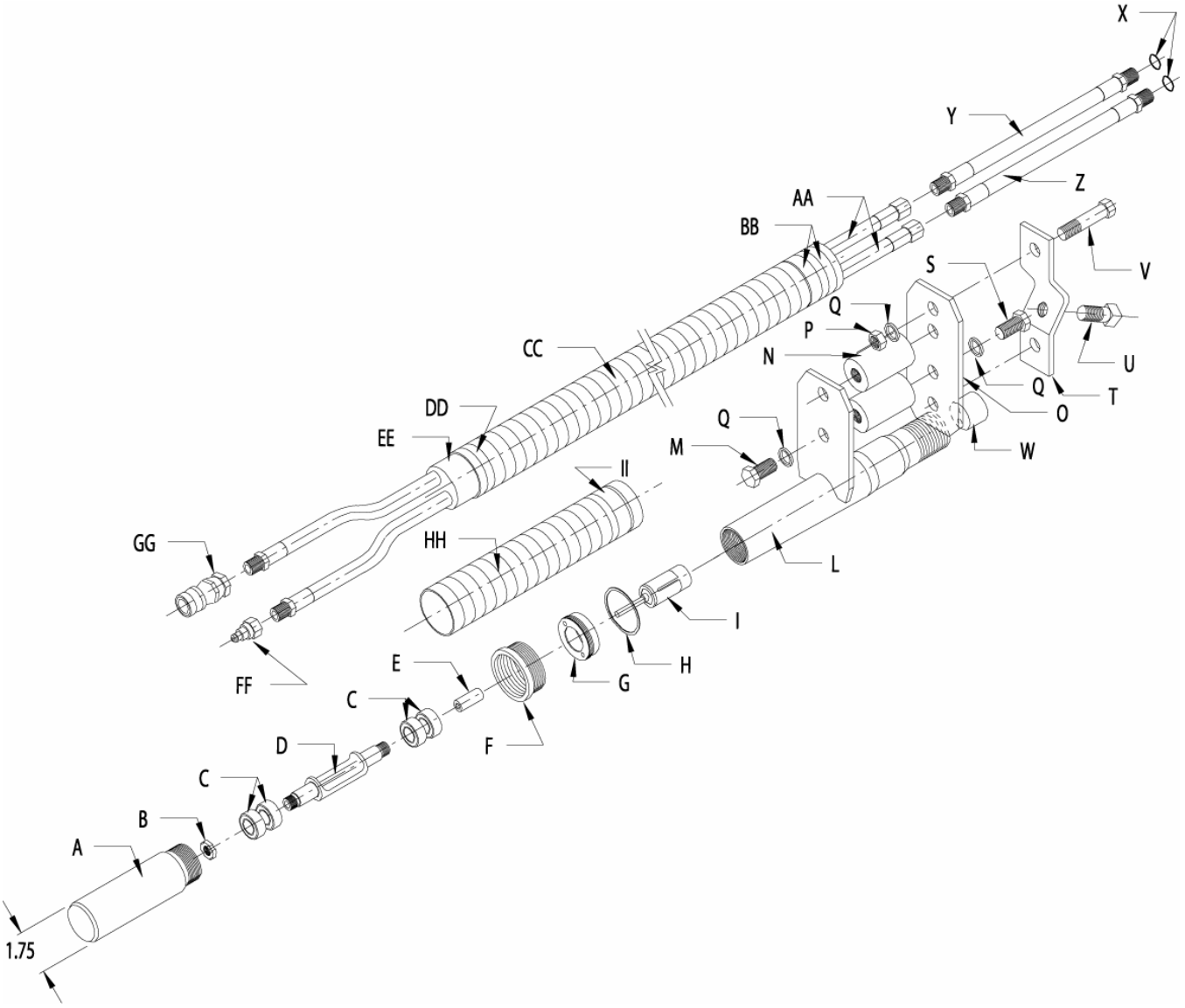
1-3/4” Diameter Hydraulic Concrete Vibrator

HV-3B

ITEM	PART #	DESCRIPTION	QTY
A	0A1240-00000	ECCENTRIC HOUSING	1
B	001244-00000	BEARING LOCK NUT	2
C	001243-00000	ECCENTRIC BEARING	4
D	001241-00000	ECCENTRIC WEIGHT	1
E	001242-00000	ECCENTRIC WEIGHT DRIVE	1
F	001245-00000	ADAPTOR	1
G	001226-00000	MOTOR LOCKNUT	1
H	001236-00000	O-RING	1
I	0A1225-00000	HYDRAULIC MOTOR	1
L	0A1228-00000	HYD MOTOR HOUSING	1
M	006040-1.000	H.H. CAP SCREW 1/2”-13 X 1.00”	2
N	001206-00000	ISOLATOR	2
O	001207-00000	MOUNTING BRACKET	1
P	006074-00000	HEX NUT 1/2”-13	2
Q	006151-00000	LOCKWASHER 1/2”	6
S	001208-00000	H.H. CAP SCREW – SPECIAL	2
T	000678-00000	MOUNTING CLAMP	1
U	006288-0.750	SET SCREW 1/2”-13 X 0.75	2
V	006040-3.000	H.H. CAP SCREW 1/2”-13 X 3.00	2
W	001253-00000	STOPPER	1
X	001234-00000	O-RING	2
Y	0A1230-00021	HYD MOTOR HOSE - PRESSURE 1/4”	1
Z	0A1255-00021	HYD MOTOR HOSE - RETURN 3/8”	1
AA	0A1212-0000?	HYD HOSE - SPECIFY LENGTH IN INCHES	2
BB	001218-00000	HOSE CLAMP	2
CC	001214-00000	COVER HOSE - SPECIFY LENGTH IN INCHES	
DD	001219-00000	HOSE CLAMP	1
EE	001215-00000	PLUG	1
FF	001217-00000	MALE DISCONNECT	1
GG	001216-00000	FEMALE DISCONNECT	1
HH	001233-00000	PROTECTOR HOSE	12”
II	001235-00000	HOSE CLAMP	1

1-3/4” Diameter Hydraulic Concrete Vibrator

HV-3B

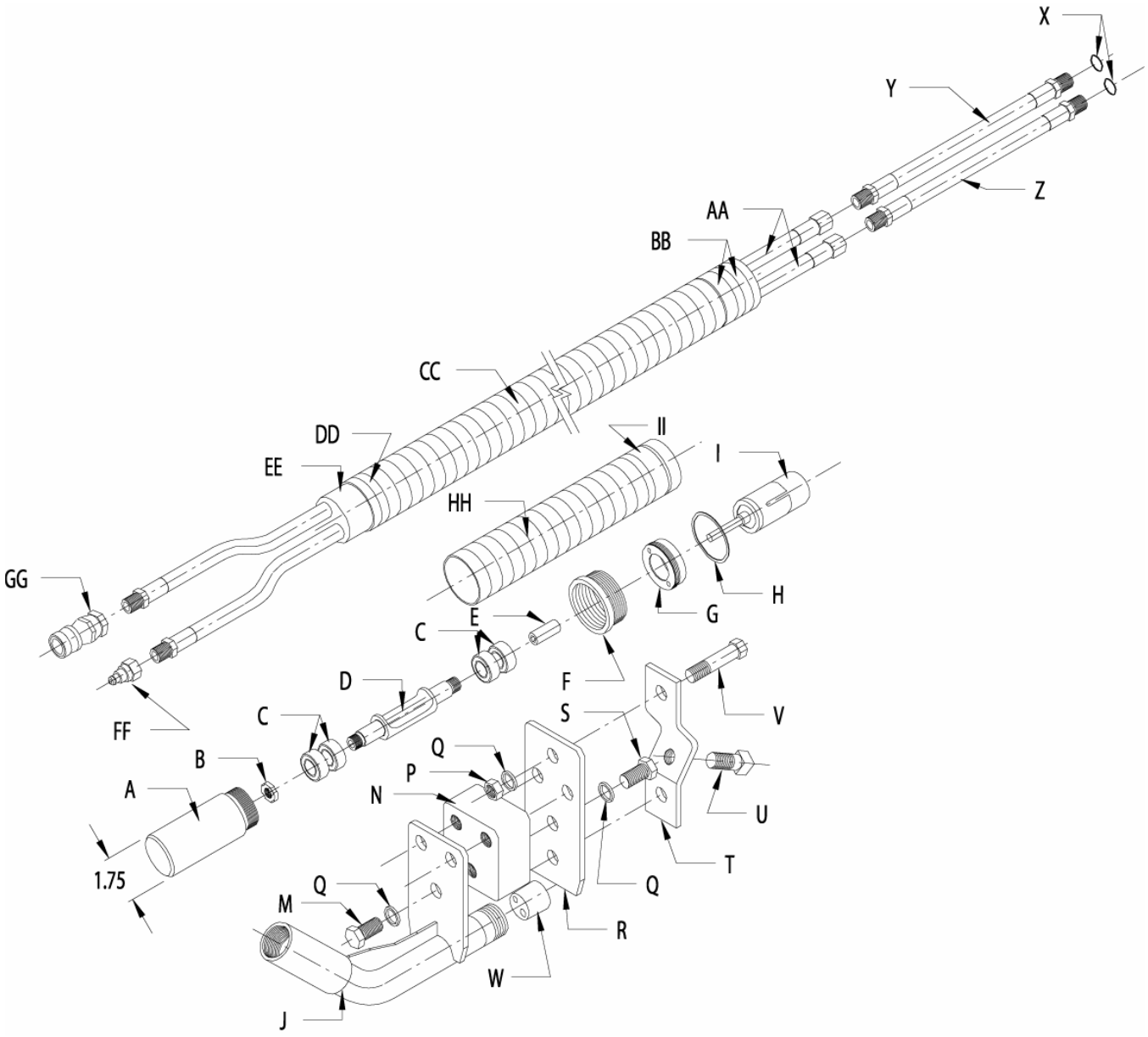


1-3/4” Diameter Hydraulic Concrete Vibrator

HV-3P

ITEM	PART #	DESCRIPTION	QTY
A	0A1240-00000	ECCENTRIC HOUSING	1
B	001244-00000	BEARING LOCK NUT	2
C	001243-00000	ECCENTRIC BEARING	4
D	001241-00000	ECCENTRIC WEIGHT	1
E	001242-00000	ECCENTRIC WEIGHT DRIVE	1
F	001245-00000	ADAPTOR	1
G	001226-00000	MOTOR LOCKNUT	1
H	001236-00000	O-RING	1
I	0A1225-00000	HYDRAULIC MOTOR	1
J	0A1227-00001	HYD MOTOR HOUSING	1
M	006040-1.000	H.H. CAP SCREW 1/2”-13 X 1.00”	3
N	01206-00002	ISOLATOR	1
P	006074-00000	HEX NUT 1/2”-13	2
Q	006151-00000	LOCKWASHER 1/2”	8
R	001211-00000	MOUNTING BRACKET HV-2PIPE	1
S	001208-00000	H.H. CAP SCREW - SPECIAL	3
T	000678-00000	MOUNTING CLAMP	1
U	006288-0.750	SET SCREW 1/2”-13 X 0.75”	2
V	006040-3.000	H.H. CAP SCREW 1/2”-13 X 3.00”	2
W	001253-00000	STOPPER	1
X	001234-00000	O-RING	2
Y	0A1230-00021	HYD MOTOR HOSE - PRESSURE 1/4”	1
Z	0A1255-00021	HYD MOTOR HOSE- RETURN 3/8”	1
AA	0A1212-0000?	HYD HOSE - SPECIFY LENGTH IN INCHES	2
BB	001218-00000	HOSE CLAMP	2
CC	001214-00000	COVER HOSE - SPECIFY LENGTH IN INCHES	
DD	001219-00000	HOSE CLAMP	1
EE	001215-00000	PLUG	1
FF	001217-00000	MALE DISCONNECT	1
GG	001216-00000	FEMALE DISCONNECT	1
HH	001233-00000	PROTECTOR HOSE	12”
II	001235-00000	HOSE CLAMP	1

HV-3P



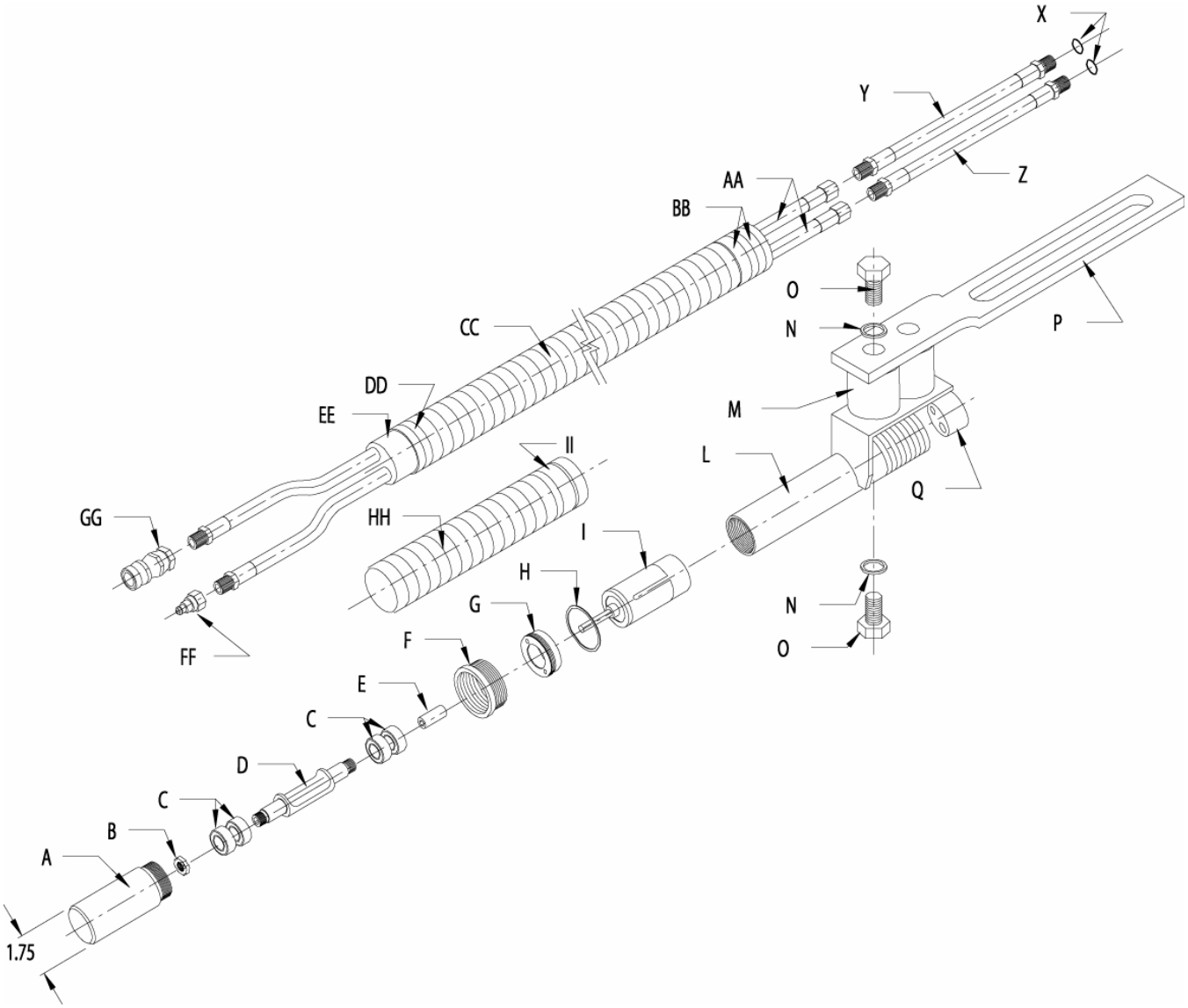
1-3/4” Diameter Hydraulic Concrete Vibrator

HV-3S1

ITEM	PART #	DESCRIPTION	QTY
A	0A1240-00000	ECCENTRIC HOUSING	1
B	001244-00000	BEARING LOCK NUT	2
C	001243-00000	ECCENTRIC BEARINGS	4
D	001241-00000	ECCENTRIC WEIGHT	1
E	001242-00000	ECCENTRIC WEIGHT DRIVE	1
F	001245-00000	ADAPTOR	1
G	001226-00000	MOTOR LOCKNUT	1
H	001236-00000	O-RING	1
I	0A1225-00000	HYDRAULIC MOTOR	1
L	0A1257-000000	MOTOR HOUSING	1
M	001206-00000	ISOLATOR	2
N	006151-00000	1/2” LOCKWASHER	4
O	006040-1.000	CAP SCREW	4
P	A12464-00000	MOUNTING BRACKET	1
Q	001253-00000	STOPPER	1
X	001234-00000	O-RING	2
Y	0A1230-00021	HYD MOTOR HOSE - PRESSURE 1/4”	1
Z	0A1255-00021	HYD MOTOR HOSE - RETURN 3/8”	1
AA	0A1212-0000?	HYD HOSE - SPECIFY LENGTH IN INCHES	2
BB	001218-00000	HOSE CLAMP	2
CC	001214-00000	COVER HOSE - SPECIFY LENTGH IN INCHES	
DD	001219-00000	HOSE CLAMP	1
EE	001215-00000	PLUG	1
FF	001217-00000	MALE DISCONNECT	1
GG	001216-00000	FEMALE DISCONNECT	1
HH	001233-00000	PROTECTOR HOSE	12”
II	001235-00000	HOSE CLAMP	1

1-3/4” Diameter Hydraulic Concrete Vibrator

HV-3S1



Vibrator Repair Kit for
HV-4 Series 0A1753-00000

PART #	DESCRIPTION	QTY
001507-00000	ECCENTRIC BEARING	4
001702-00000	RETAINING RING	1
001703-00000	BEARING	1
001710-00000	END CAP O-RING	1
001729-00000	MACHINED WASHER SEAL	1
017011-00000	DRIVE SHAFT PIN	1
0A1745-00000	O-RING HOUSING & SEAL ASSEMBLY	1

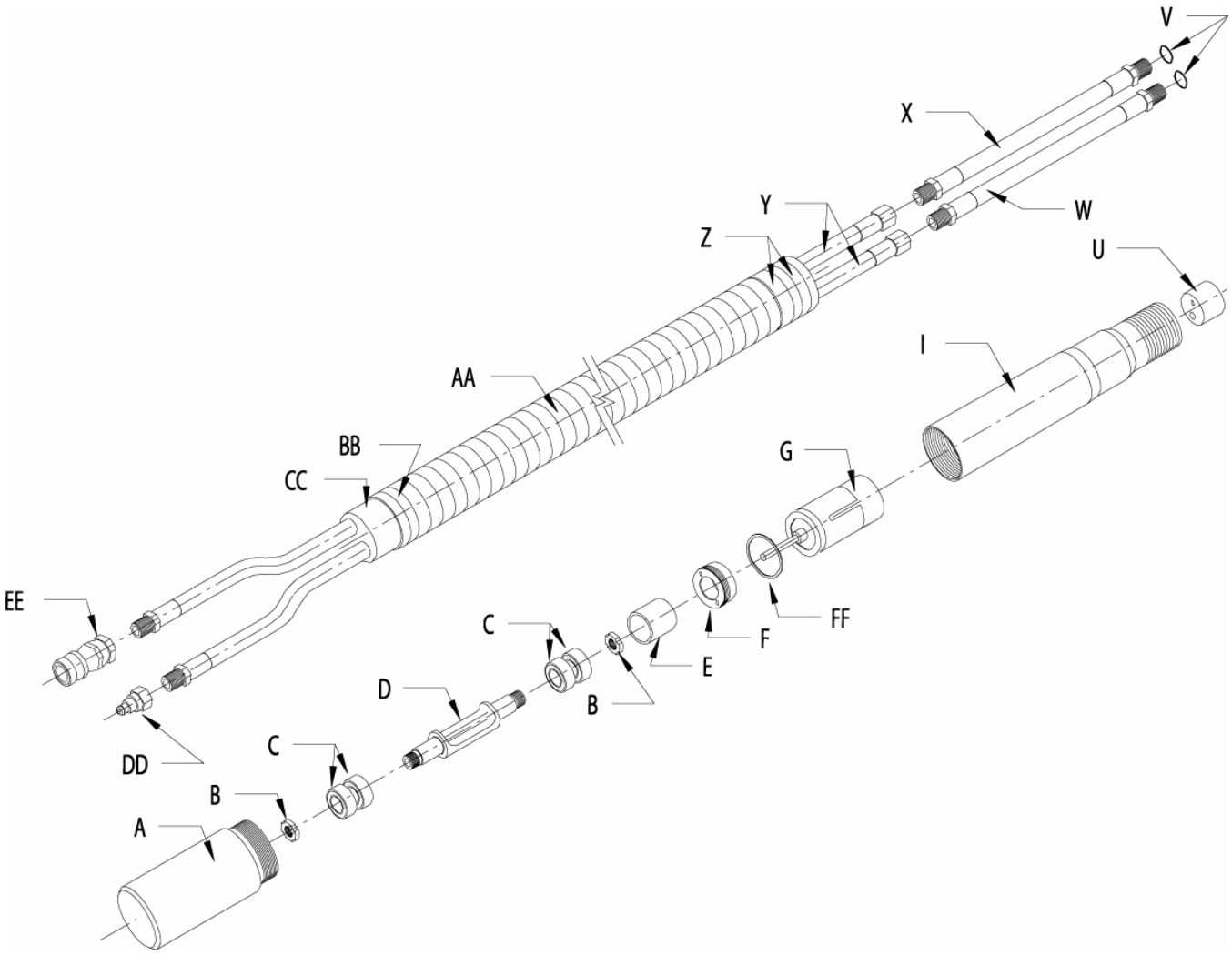
3” Diameter Hydraulic Concrete Vibrator

HV-4 HV-4H

ITEM	PART #	DESCRIPTION	QTY
A	0A1502-00000	ECCENTRIC HOUSING (HV-4 & HV-4H)	1
B	001510-00000	BEARING LOCK NUT	2
*C	001507-00000	ECCENTRIC BEARING	4
D	001503-00000 002651-00000	ECCENTRIC WEIGHT (HV-4) HEAVY ECCENTRIC WEIGHT (HV-4H)	1 1
E	001508-00000	ECCENTRIC BEARING HOUSING	1
F	001513-00000	MOTOR LOCKNUT	1
G	0A1225-00000	HYDRAULIC MOTOR	1
I	0A1512-00000	MOTOR HOUSING	1
U	001253-00000	STOPPER	1
V	001234-00000	O-RING	2
W	0A1230-00021	1/4” HYDRAULIC MOTOR HOSE	1
X	0A1255-00021	3/8” HYDRAULIC MOTOR HOSE	1
Y	0A1212-0000?	HYD HOSE - SPECIFY LENGTH IN INCHES	2
Z	001218-00000	HOSE CLAMP	1
AA	001214-00000	COVER HOSE - SPECIFY LENGTH IN INCES	
BB	001219-00000	HOSE CLAMP	1
CC	001215-00000	PLUG	1
DD	001217-00000	MALE DISCONNECT	1
EE	001216-00000	FEMALE DISCONNECT	1
FF	001518-00000	O-RING	1

*INCLUDED IN VIBRATOR REPAIR KIT 0A1753-00000

HV-4 HV-4H

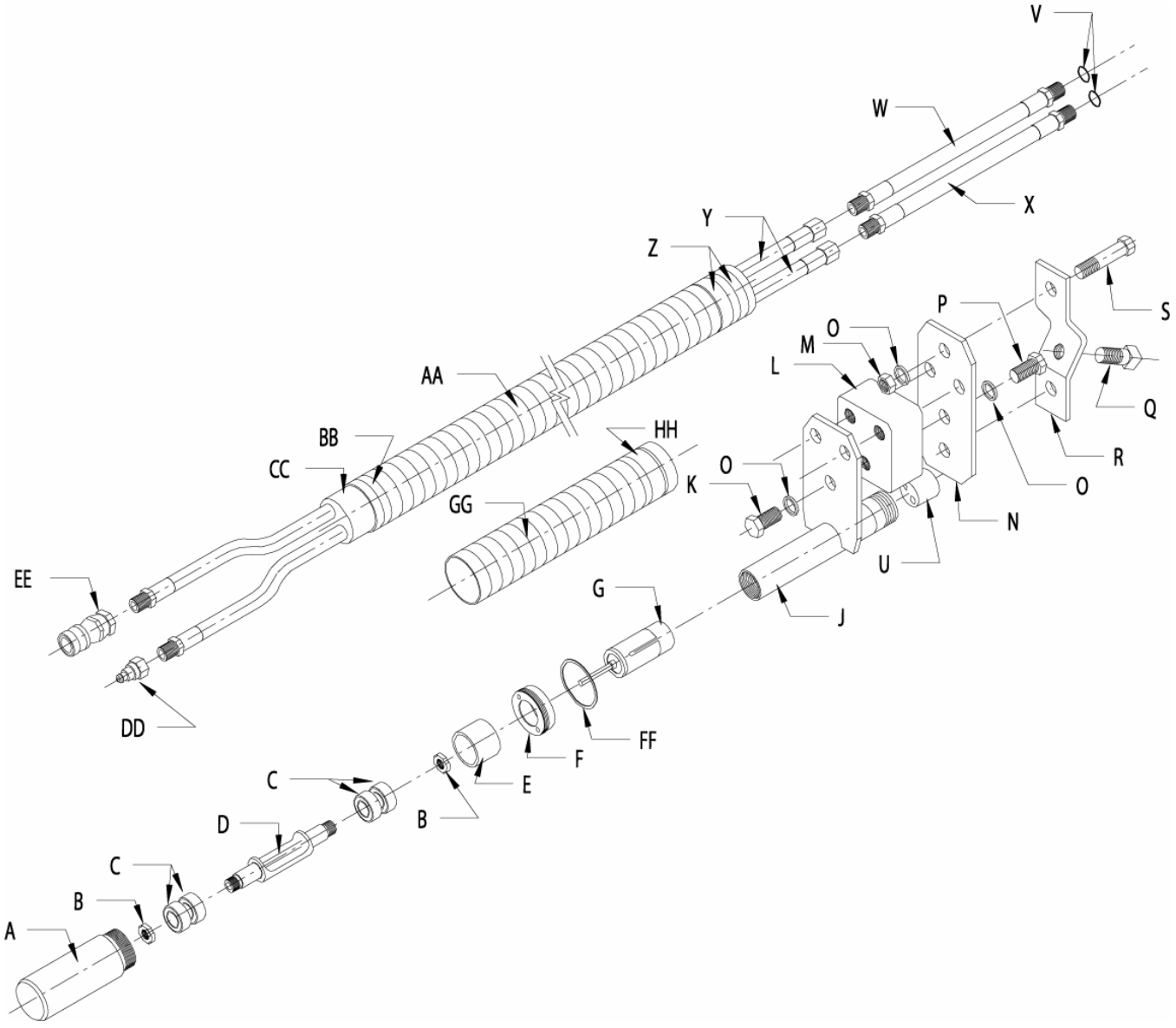


HV-4B HV-4BH

ITEM	PART #	DESCRIPTION	QTY
A	0A1502-00000	ECCENTRIC HOUSING (HV-4B & HV-4BH)	1
B	001510-00000	BEARING LOCK NUT	2
*C	001507-00000	ECCENTRIC BEARING	4
D	001503-00000 002651-00000	ECCENTRIC WEIGHT (HV-4B) HEAVY ECCENTRIC WEIGHT (HV-4BH)	1 1
E	001508-00000	ECCENTRIC BEARING HOUSING	1
F	001513-00000	MOTOR LOCKNUT	1
G	0A1225-00000	HYDRAULIC MOTOR	1
J	0A1514-00000	MOTOR HOUSING	1
K	006040-1.000	CAP SCREW	3
L	001206-00002	ISOLATOR	1
M	006074-00000	NUT	2
N	001211-00000	MOUNTING BRACKET	1
O	006151-00000	LOCK WASHER	8
P	001208-00000	CAP SCREW SPECIAL	3
Q	006288-0.750	SET SCREW	2
R	000678-00000	MOUNTING CLAMP	1
S	006040-3.000	CAP SCREW	2
U	001253-00000	STOPPER	1
V	001234-00000	O-RING	2
W	0A1230-00021	1/4” HYDRAULIC MOTOR HOSE	1
X	0A1255-00021	3/8” HYDRAULIC MOTOR HOSE	1
Y	0A1212-0000?	HYD HOSE - SPECIFY LENGTH IN INCHES	2
Z	001218-00000	HOSE CLAMP	1
AA	001214-00000	COVER HOSE - SPECIFY LENGTH IN INCES	
BB	001219-00000	HOSE CLAMP	1
CC	001215-00000	PLUG	1
DD	001217-00000	MALE DISCONNECT	1
EE	001216-00000	FEMALE DISCONNECT	1
FF	001518-00000	O-RING	1
GG	001233-00000	PROTECTOR HOSE	12”
HH	001235-00000	HOSE CLAMP	1

*INCLUDED IN VIBRATOR REPAIR KIT 0A1753-00000

HV-4B HV-4BH



HV-4P HV-4PH

ITEM	PART #	DESCRIPTION	QTY
A	0A1502-00000	ECCENTRIC HOUSING (HV-4P & HV-4PH)	1
B	001510-00000	BEARING LOCK NUT	2
*C	001507-00000	ECCENTRIC BEARING	4
D	001503-00000 002651-00000	ECCENTRIC WEIGHT (HV-4P) HEAVY ECCENTRIC WEIGHT (HV-4PH)	1 1
E	001508-00000	ECCENTRIC BEARING HOUSING	1
F	001513-00000	MOTOR LOCKNUT	1
G	0A1225-00000	HYDRAULIC MOTOR	1
H	0A1511-00000	MOTOR HOUSING	1
K	006040-1.000	CAP SCREW	4
L	001206-00002	ISOLATOR	1
M	006074-00000	NUT	2
N	001211-00000	MOUNTING BRACKET	1
O	006151-00000	LOCK WASHER	10
P	001208-00000	CAP SCREW SPECIAL	4
Q	006288-0.7500	SET SCREW	2
R	000678-00000	MOUNTING CLAMP	1
S	006040-3.000	CAP SCREW	2
U	001253-00000	STOPPER	1
V	001234-00000	O-RING	2
W	0A1230-00021	1/4” HYDRAULIC MOTOR HOSE	1
X	0A1255-00021	3/8” HYDRAULIC MOTOR HOSE	1
Y	0A1212-0000?	HYD HOSE - SPECIFY LENGTH IN INCHES	2
Z	001218-00000	HOSE CLAMP	1
AA	001214-00000	COVER HOSE - SPECIFY LENGTH IN INCES	
BB	001219-00000	HOSE CLAMP	1
CC	001215-00000	PLUG	1
DD	001217-00000	MALE DISCONNECT	1
EE	001216-00000	FEMALE DISCONNECT	1
FF	001518-00000	O-RING	1
GG	001233-00000	PROTECTOR HOSE	12”
HH	001235-00000	HOSE CLAMP	1

*INCLUDED IN VIBRATOR REPAIR KIT 0A1753-00000

HV-4P HV-4PH