

Vibratory Post Driver Series 2

Operation and Maintenance Manual



100502, 100507



888-376-7027 | BlueDiamondAttachments.com

Register your
WARRANTY
within 30 days
of purchase



Introduction: Owner Information

Thank you for your decision to purchase a Blue Diamond® Series 2 Vibratory Post Driver. To ensure maximum performance of your equipment, it is mandatory that you thoroughly study the Operator's manual and follow the recommendations. Proper operation and maintenance are essential to maximize equipment life and prevent personal injury.

Operate and maintain this equipment in a safe manner and in accordance with all applicable local, state, and federal codes, regulations and /or laws. Follow all on-product labeling and instructions.

Make sure that all personnel have read this Operator's Manual and thoroughly understand safe and correct operating, installation and maintenance procedures.

Blue Diamond is continually working to improve its products. Blue Diamond reserves the right to make any improvements or changes as deemed practical and possible without incurring any responsibility or obligation to make any changes or additions to equipment sold previously.

Although great care has been taken to ensure the accuracy of this publication, Blue Diamond makes no warranty or guarantee of any kind, written or expressed, implied or otherwise with regard to the information contained within this manual. Blue Diamond assumes no responsibility for any errors that may appear in this manual and shall not be liable under any circumstances for incidental, consequential or punitive damages in connection with, or arising from the use of this manual.

Keep this manual available for frequent reference. All new operators or owners must review the manual before using the equipment and annually thereafter. Contact your Blue Diamond Attachments Dealer for assistance, information, or additional copies of the manual. Contact www.bluediamondattachments.com or call 888-376-7027 for a complete list of dealers in your area.

Serial Number Location:

Please record attachment information in the space provided for future reference.



Model Number: _____

Serial Number: _____

Dealer Name: _____

Dealer Number: _____

Date of Purchase: _____

The serial number plate is located on the back of the rear housing weldment.

Always use your serial number when requesting information or when ordering parts.

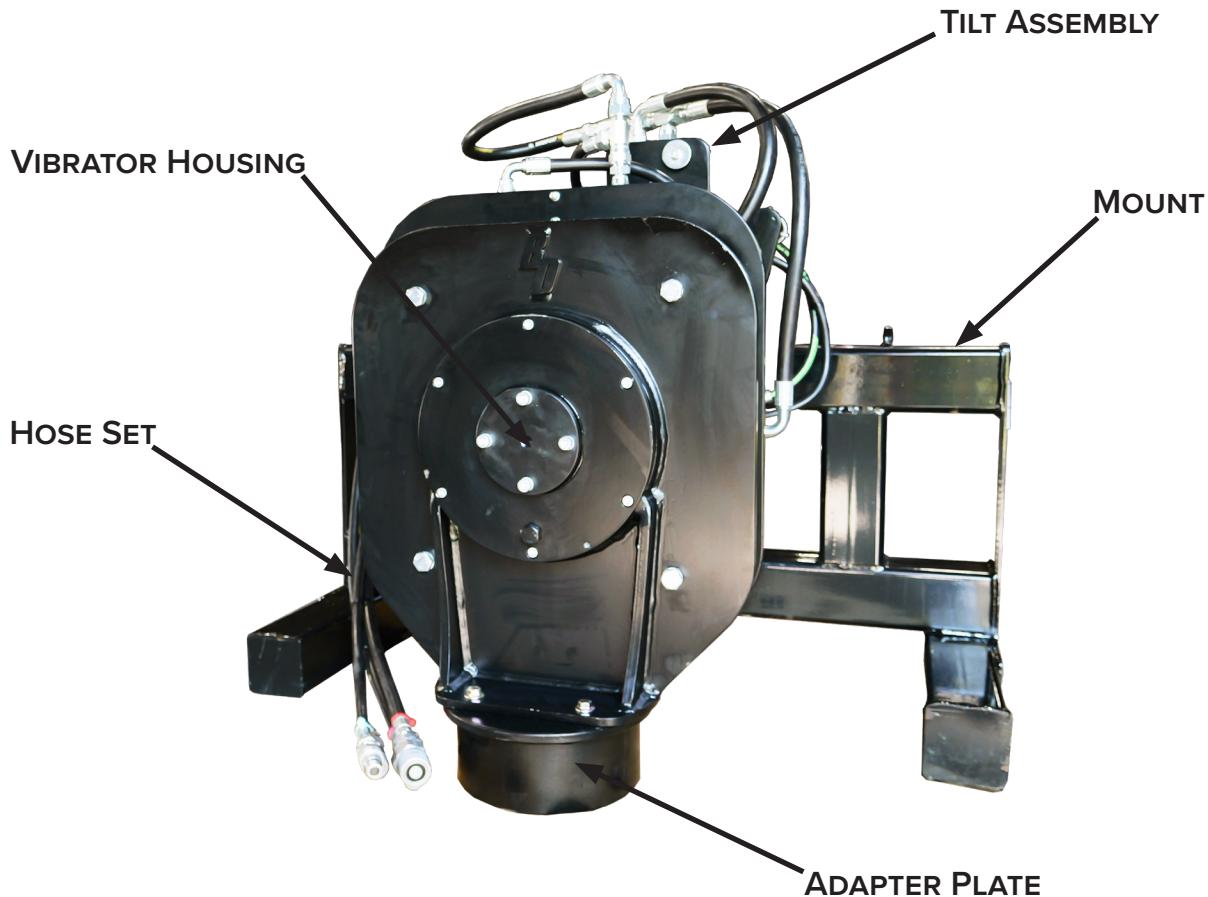
NOTE: The directions left, right, front and rear, as mentioned throughout this manual, are as viewed from the operator's position.

Table of Contents

1. Introduction.....	4
1.1 Attachment Identification	4
1.2 Attachment Model Numbers	4
2. Safety	5-7
2.1 General Safety Information.....	5
2.2 Qualified Operators.....	6
2.3 Equipment Safety Instructions	7
3. Operation	8-10
3.1 Setting up the Post Driver	8
3.2 Attachment Installation.....	8
3.3 Mandatory Shut Down Procedure.....	9
3.4 Operating the Attachment	9
4. Maintenance	11-14
4.1 Greasing and Lubricating the Post Driver.....	11
4.2 Replacement of Rubber Vibration Mounts.....	11
4.3 Daily Attachment Check.....	11
4.4 Servicing the Hydraulic Circuit / Motor	11
4.5 Replacing the Motor Shaft Seal	11
4.6 Troubleshooting	14
5. Parts.....	15-25
5.1 Main Parts Breakdown.....	15
5.2 Mechanical Parts.....	16
5.3 Tilt Option Mechanical Parts	18
5.4 Solenoid Detail View.....	19
5.5 Non-Tilt Option Mechanical Parts	20
5.6 Tilt Option Hydraulic Parts.....	22
5.7 Tilt / Non-Tilt Common Hydraulic Parts	24
5.8 Post Adapter Cups	25
6. Specifications	26-27
6.1 Attachment Specifications	26
6.2 Torque Specifications	27
7. Warranty	29

1. Introduction

1.1 Attachment Identification



1.2 Attachment Model Numbers

VIBRATORY POST DRIVER SERIES 2	MODEL NUMBER
Non-Tilt	100502
With Tilt Option	100507
Tilt Option Only	100510

2. Safety

2.1 General Safety Information



SAFETY ALERT SYMBOL



This **SAFETY ALERT SYMBOL** identifies important safety messages on the equipment and in the owner's manual. When you see this symbol, be alert to the possibility of personal injury and carefully read the message that follows.



IMPORTANT



The signal word **IMPORTANT** identifies procedures which must be followed to avoid damage to the machine.



DANGER



The signal word **DANGER** on the machine and in the manuals indicates a hazardous situation which, if not avoided, will result in death or serious injury.



WARNING



The signal word **WARNING** on the machine and in the manuals indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION



The signal word **CAUTION** on the machine and in the manuals indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

NOTE: Notes are used to indicate important information. This information may be repeated in other areas of the manual.

Operating Safety

- Read and follow instructions in this manual and the machine's Operators Manual before operating.
- The manual must always remain with the machine. In case of loss or damage, request a new copy from your dealer or from Blue Diamond.
- Strictly follow all rules prescribed by the safety pictograms/decals applied to the machine. Ensure that all safety pictograms/decals are legible. If pictograms/decals are worn, they must be replaced with new ones obtained from Blue Diamond and placed in the position indicated by this manual.
- Before using the machine, make sure that all safety devices are installed and in good working conditions. In case of damage or shields, replace them immediately.
- It is absolutely forbidden to remove or alter safety devices and/or safety precautions

2. Safety

2.2 Qualified Operators

Qualified Operators

A well-trained and careful operator is the best protection against accidents. Most accidents are caused by *not following basic safety procedures*.



DANGER



AVOID SERIOUS INJURY OR DEATH

Operators must receive instructions before operating the machine. Untrained operators can cause serious injury or death.

For an operator to be qualified, he or she must not use drugs or alcoholic drinks which impair alertness or coordination while working. An operator who is taking prescription drugs must get medical advice to determine if he or she can safely operate a machine and the equipment. For an operator to be qualified, he or she must have read and understood the instructions of this manual, he or she must make adequate preparation for the proper use of the machine, and he or she must hold a driving license.

In case of doubt regarding the use of the machine and/or the interpretation of this manual, the operator must contact either their dealer or Blue Diamond.

Operator Training

- Check the rules and regulations at your location. The rules may include an employer's work safety requirements. Regulations may apply to local driving requirements or use of a Slow Moving Vehicle (SMV) emblem. Regulations may identify a hazard such as a utility line.
- The new operator must start in an area without bystanders and use all the controls until he or she can operate the machine safely under all conditions of the work area.

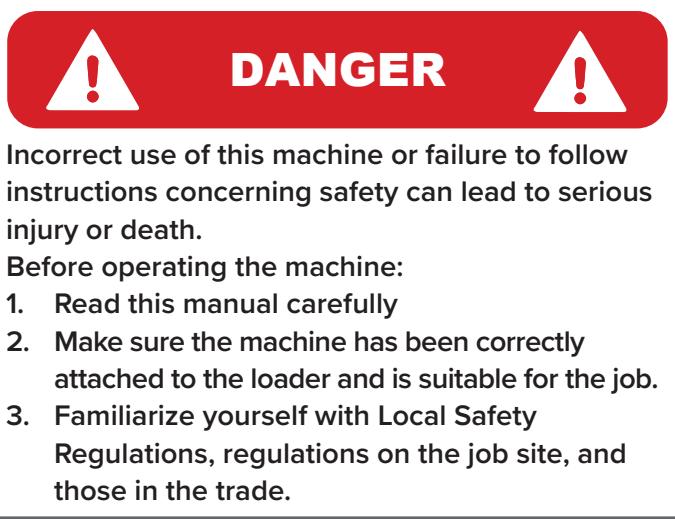
Operator Responsibilities

- Read and understand all safety information, supplied in the Operator's manual of the prime mover and the Vibrating Post Driver. Read and follow all the decals on the prime mover and the Vibrating Post Driver and follow all the procedures as laid out in the manual and decals at all times.
- Check that all the safety devices supplied on the Vibrating Post Driver and the prime mover are working properly before using any of the equipment.
- Ensure that you fully understand all instructions. If you are unclear, contact your local dealer or Blue Diamond Product Support for clarification.
- When loading, make sure the Vibrating Post Driver stays near to ramps, etc.
- Always lower the main arm fully before leaving the operator's seat.
- Carefully inspect all hydraulic pipes and connections on a routine basis. Always use a piece of paper or cardboard when looking for leaks.
- If you suspect a hydraulic leak, NEVER place any part of your body near the leak. Carry out the Mandatory Shut Down Procedure in section 3.3 on page 9 and have a qualified hydraulics engineer test and repair any leaks.
- Before starting, and during operation of the attachment, make sure there are no people or animals in the operation area.
- During operation, adjustment, maintenance, repairing, or transportation of the machine, the operator must always use appropriate Personal Protective Equipment (PPE) including but not limited to safety glasses, working gloves, dust-mask, safety helmet, and hearing protection.
- Do not operate the attachment or machine while wearing loose fitting clothing that can be entangled or caught in parts of the machine.
- Do not operate the implement when tired, not in good condition, or under the influence of alcohol or drugs.

2. Safety

2.3 Safety Guidelines

Operating Safety



Incorrect use of this machine or failure to follow instructions concerning safety can lead to serious injury or death.

Before operating the machine:

1. Read this manual carefully
2. Make sure the machine has been correctly attached to the loader and is suitable for the job.
3. Familiarize yourself with Local Safety Regulations, regulations on the job site, and those in the trade.

- Read and follow instructions in this manual and the machine's Operator's Manual before operating.
- Under no circumstances should young children be allowed to work with this equipment.
- Check for overhead and / or underground lines before operating equipment (if applicable).
- In addition to the design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence and proper training of personnel involved in the operation, transport, maintenance and storage of equipment.
- Check that the attachment is securely fastened to the machine.
- Make sure all the machine controls are in the NEUTRAL before starting the machine.
- Operate the equipment only from the operator's position.
- Operate the equipment according to the Operator's Manual.
- When learning to operate the equipment, do it at a slow rate in an area clear of bystanders.

- Ensure that all workers present are at least 25 feet away from any part of the Vibrating Post Driver and prime mover when they are being worked on or operated. Ensure all bystanders and operators are wearing correct PPE, including plastic face shields.
- Do not let people stand near to, in front of, or to the rear of the Vibrating Post Driver or prime mover when in use.
- If using a person to signal, position the post with the post driver and the signaler. Then move the signaler at least 25 feet from the machine before operating the post driver.
- The equipment must be used ONLY on approved machines.
- DO NOT modify the equipment in any way. Unauthorized modification may impair the function and / or safety and could affect the life of the equipment.
- DO NOT make any adjustments or repairs on the equipment while the machine is running.
- Wear safety glasses, gloves, hearing protection and other protective clothing when required.

Hydraulic System

- Check hydraulic tubes, hoses and fittings for damage and leakage. Never use open flame or bare skin to check for leaks. Hydraulic tubes and hoses must be properly routed and have adequate support and secure clamps. Tighten or replace any parts that show leakage.
- Always clean fluid spills. Do not use gasoline or diesel fuel for cleaning parts. Use commercial nonflammable solvents.

3. Operation

3.1 Setting up the Post Driver



DANGER



Read the complete manual as well as the decals on the vibrating post driver before trying to set up, use, or service and maintain the unit.

The Vibrating Post Driver is supplied fully assembled and tested for your safety. However, it is advisable to carry out the following checks before using the attachment.

Safety Decals

Make sure the machine is fitted with all the safety decals that should be provided. Ensure that they are clearly and easily readable and that they are always followed.

Hoses & Fittings

Ensure that all the hydraulic hoses and fittings are tight and secure including the case drain. Make sure that the Quick Release couplings are properly fitted before starting the prime mover and letting oil into the Vibrating Post Driver circuit. Check that hoses are not damaged in any way which may later lead to leaks when under pressure.



WARNING



Leaking fluids under pressure can enter the skin and cause serious injury or death. Immediate medical attention is required. Wear goggles. Use cardboard to check for leaks.

Safety Guards

Ensure that the safety guards are in place, correctly fitted and secure.

3.2 Attachment Installation

To attach the Vibrating Post Driver to the prime mover:

- Start the prime mover and rotate the dipper crowd ram forward.
- Move forward hooking the machine arm end into the Vibrating Post Driver attachment bracket.
- Now go through the Mandatory Shut Down Procedure.
- Get off the prime mover.
- Attach the locking levers (skid steer) or pins (excavator)

Follow the manufacturer's instructions when using a semi-quick or hydraulic hitch on an excavator.

- Connect the three hydraulic hoses from the Vibrating Post Driver to the auxiliary quick release couplings on the prime mover as per the machine's owner's manual. Failure to connect these correctly will damage the hydraulic motor and void your warranty.

IMPORTANT

Make sure the return line or case drain of the auxiliary circuit goes directly back to the tank. If it does not do so, it could ruin the hydraulic motor and your warranty will be voided.

There must be no back pressure or spikes caused when operating the post driver.

3. Operation

3.3 Mandatory Shut Down Procedure

Before adjusting, maintaining, servicing, or cleaning the post driver, you must **ALWAYS** follow the Mandatory Shut Down Procedure.



DANGER



When getting off the prime mover to adjust, repair, or maintain the post driver **ALWAYS** complete the **MANDATORY SHUT DOWN PROCEDURE**. Failure to do so could lead to serious injury or death.

1. Follow the instructions in the manual of the prime mover for the method of shutting down and stopping the machine. In addition to those steps, use the following steps.
2. Allow the drive levers on the prime mover to return to the neutral position.
3. Move all the auxiliary flow control levers into the OFF position.
4. Lower the arm of the prime mover with the post driver attached until the vibrating post driver fits into its provided parking frame.
5. Engage the parking brake, if fitted.
6. Return the throttle lever to idle, turn off the engine, and remove the ignition key.
7. Move the auxiliary hydraulic lever, the main arm lift lever, and the crowd levers backwards and forwards to ensure that all the hydraulic circuits are depressurized and that no hydraulic rams are carrying any weight.
8. Exit the prime mover, following the correct procedure for leaving the prime mover as indicated in the machine operator's manual.

3.4 Operating the Attachment

The Vibrating Post Driver attachment is designed for driving fence posts or any other wooden/metal/plastic posts into the ground. If used correctly, this unit will give a high output and will be very reliable and safe to use. Follow the operating instructions closely to achieve maximum efficiency. Misuse of the machine could cause injury or death and also void your warranty.

The Vibrating Post Driver is hydraulically powered and needs a minimum flow of 11 GPM at a minimum 2400 PSI. Failure to provide such flow and pressure will severely inhibit the Vibrating Post Driver's performance.



WARNING



Always follow the operating instructions found in this manual. The methods laid out are designed for your safety and the safety of others around you on the worksite.

- Attach the post driver to the prime mover. See section 3.2 Attachment Installation on page 8.
- Check that all the Quick Release hydraulic couplings are correctly fitted.
- Start the prime mover as per the Operator's Manual.
- Move the prime mover and post driver into position by the post.
- Allow the signaler to stand up the post in the desired position.
- Gently lower the post cup over the end of the post.
- Activate the hydraulic control valve so that the post driver pushes vertically down on the top of the post. Ensure that the movement of the dipper ram is not too fast and drives the post in too deep.
- Level the post driver using the prime mover.
- Level the post driver's left and right hand positions until vertical.
- Check with the signaler, if used, that the post is vertical in all directions.

3. Operation

3.4 Operating the Attachment Cont'd

- Ensure the prime mover has positioned the post driver in the best position to drive the post all the way in.
- Engage the full RPM of the prime mover.
- Engage the auxiliary hydraulic circuit.
- ***Always ensure the post and post driver are vertical in both planes before driving in the post. Drive in SLOWLY TO START making sure you maintain the vertical position at all times.***
- ***After the post is 12" – 18" into the ground, you can exert maximum down force as the ground will now keep the post vertical.***
- When stopping the post driver, activate the opposite procedure.
- Lift the post driver off the post.



IMPORTANT

At no time let the post driver work in free air (dry fire) for more than very short periods of time. Dry firing can cause serious damage.

- Turn off the auxiliary hydraulic circuit.

Basic Connection Check

1. Ensure the prime mover has less than 175 PSI back pressure.
2. Ensure the hydraulics are set in one way flow.
3. Verify which hose is supply and which is return.
4. The post driver should "hum" at high speed, rather than "banging".
5. This high speed "hum" vibration travels through the post rather than the prime mover when downward force is exerted on the post.
6. Always check that the anti-vibration (A/V) rubber bolts are tight every 30 minutes when the post driver is new.

4. Maintenance

The correct maintenance of the unit will lead to a longer life, safer operation, and a more effective use of this attachment.

Maintenance of the unit can be divided into three separate operations.

1. Lubrication
2. Maintenance and Replacement of rubber vibration mounts.
3. Daily checking of the unit and its hydraulic hoses, etc. for leaks, cracks, breaks, etc.
4. Ensuring post driver adapter bolts are set to the proper 55 in-lbs of torque.

4.1 Greasing and Lubricating the Post Driver

- Make sure the machine has been put through the Mandatory Shut Down procedure. See section 3.3 Mandatory Shut Down Procedure on page 9.
- Ensure that the host machine has been put in the advised Servicing Position. See the procedure in section 4.4 on page 11.

4.2 Replacement of Rubber Vibration Mounts

- This should only have to be carried out when faulty or at least once every 6 months of the machine is in constant use.
- Only use the AVB mounts supplied by Blue Diamond®.
- Fit the vibrating post driver to the prime mover.
- Attach the vibrating side plate side firmly to a work bench with a clamp or other device so that it can't fall over.
- Undo the rubber mounts on one side first, replace them with new units, and bolt up.
- Repeat procedure on the other side.
- Unclamp machine from bench and test.
- Replace –anti–vibration washers as supplied at the same time.

4.3 Daily Attachment Check

Daily check the vibrating post driver, hydraulic hoses, and hydraulic valves for leaks, cracks, and breakages.

Also thoroughly check the vibrating post driver before use, ensuring that all bolts are tight, that the hoses are undamaged, and that there are no structural defects on the main plates.

NOTE: The bolts for the rubber vibration mounts need tightened after the first 2 hours of use and then checked for 180 ft/lbs torque once a week.

DO NOT use the post driver until all/any defects are corrected by a qualified repairmen.

4.4 Servicing the Hydraulic Circuit / Motor

In the event of your having to replace any of the hydraulic components in the circuit, follow this procedure:

- Contact either your local dealer or Blue Diamond Product Support to verify the problem with the attachment.
- If the attachment is still under warranty, contact your local dealer or Blue Diamond.
- If the attachment is no longer covered by the warranty and you wish to carry out the repair yourself, it is imperative that you follow the correct procedure as detailed below.

Procedure

1. Place the post driver on the floor resting on its stand.
2. Complete the Mandatory Shut Down Procedure. See section 3.3 on page 9.
3. De-pressurize the excavator or prime mover's auxiliary hydraulics (see host machine's operator's manual for this procedure).
4. When you are sure this is complete, remove both quick release couplings.
5. Make sure the post driver is resting on its stand correctly and remove locking clips and knock out pins.

4. Maintenance

4.4 Servicing the Hydraulic Circuit / Motor Cont'd

Procedure Cont'd

6. Remove prime mover away from the vicinity of the post driver.
7. De-pressurize the hydraulic circuit of the post driver by removing the quick release coupling on the return line. Drain oil into a clean container.
8. De-pressurize the other side of the circuit by removing the pressure side quick release coupling.

When you have loosened the QRC coupling, cover the pipe and coupling with a thick plastic sheet or rag. Always wear a face mask before undoing and taking off the QRC.



WARNING



When starting the vibrating post driver after it has been serviced or been disconnected from the prime mover's hydraulics, always do so making sure that when the auxiliary hydraulics on the prime mover are connected and activated to run the post driver that the prime mover engine is run at idle for at least two to three minutes. This allows the auxiliary circuit to be purged of air, without damaging the hydraulics of both the vibrating post driver and the prime mover.

DANGER

AVOID SERIOUS INJURY OR DEATH

When de-pressurizing hydraulic circuits, always make sure your eyes and face are protected by goggles or a face mask. Wear heavy duty liquid proof gloves. High pressure oil and hydraulic fluid can blind you and cause serious injury and / or death.

9. Remove and replace motor or valves as required ensuring all old oil is drained from the circuit. If you find any metal filings or other debris in the oil, flush the system out properly.
10. Re-connect all the hydraulic pipes and hoses in the correct manner as per section 3.3 on page 10.

IMPORTANT

DO NOT attempt to remove the vibrator drum housing plates. These plates are sealed with a high temperature sealant and the center cones house the bearings, which restricts the removal of the covers. If the covers need removed for any reason, contact Blue Diamond® Product Support prior to performing the removal.

4. Maintenance

4.5 Replacing the Motor Shaft Seal Cont'd

To replace the motor shaft, brass washer, and circlip, perform the following:

1. Loosen the hydraulic connectors that are shown in Figure 1.

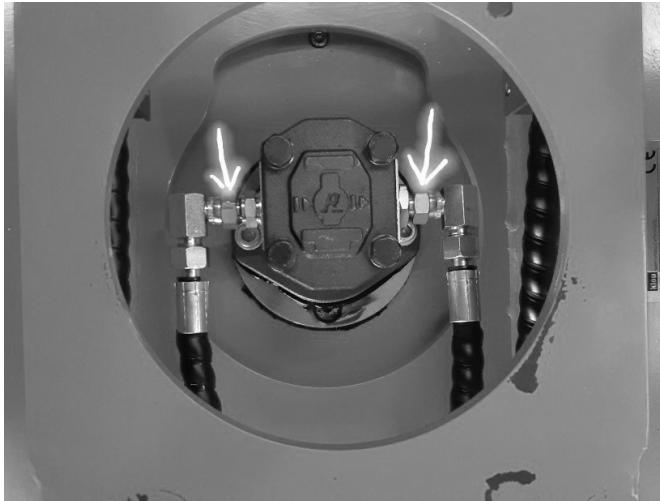


Figure 1

2. Loosen the two (2) socket cap bolts.

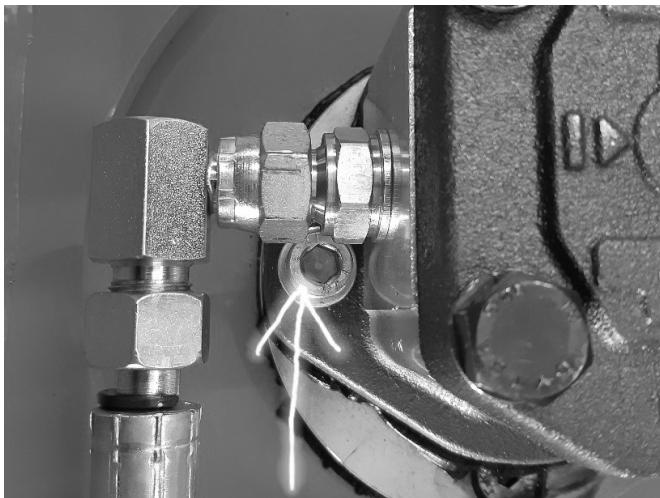


Figure 2

3. With a flathead screwdriver, pry the motor away from the plate using the notches in the base of the motor as shown in Figure 3.

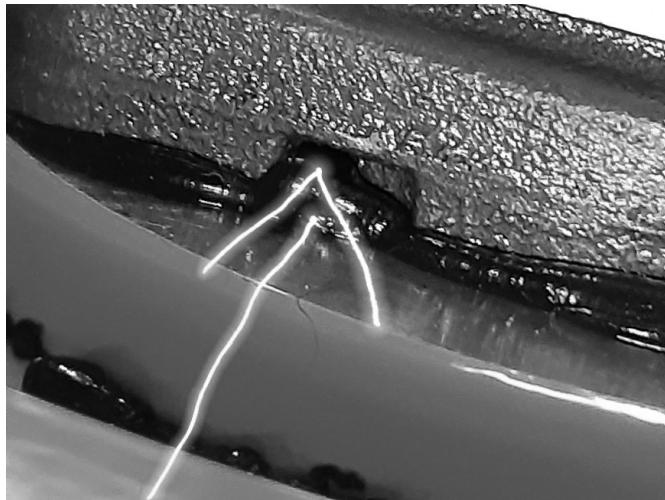


Figure 3

4. Replace the seal, washer, and circlip. Place the motor back into the plate. Ensure the base is properly resealed with a high temperature gasket sealant.
5. The vibrator drum must be drained of all excess oil. Remove the drain bolt on the front base of the drum [Figure 4]. Drain all the oil and replace with 200 mL of SAE30 engine oil.



Figure 4

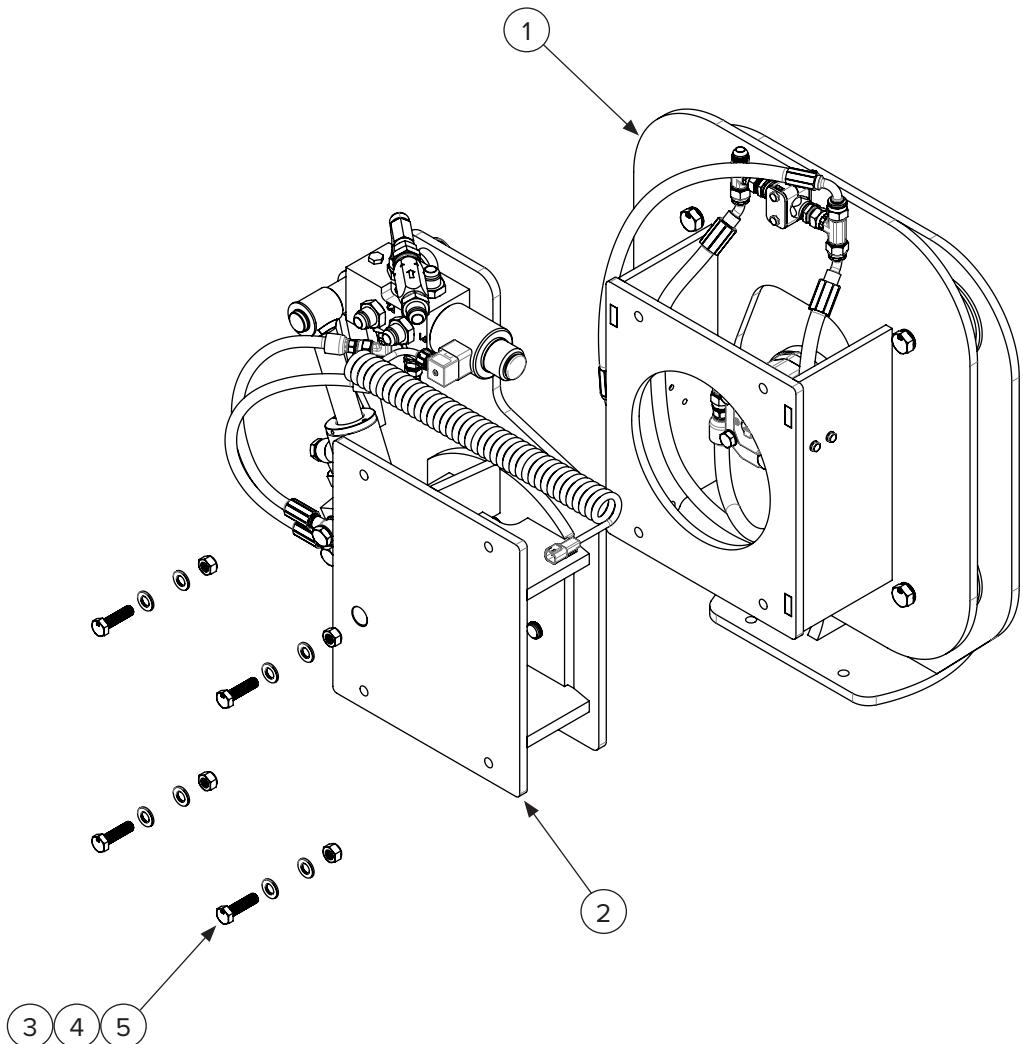
4. Maintenance

4.6 Troubleshooting

PROBLEM	CAUSE	SOLUTION
Vibrating post driver loses power.	Relief valve in prime mover not set at 2400 PSI or higher.	Reset or replace.
	Motor has failed.	Replace motor and oil in the post driver and prime mover circuit.
Hydraulic motor leaks at the shaft seal.	Too high a back pressure in the return line.	Check that the quick release coupling is functioning correctly.
		Check the prime mover for the problem.
		Return line must go directly back to tank.
Vibrating post driver functions do not work at all.	Quick release coupling not correctly fitted	Check and fit correctly.
	Auxiliary circuit not activated.	Look in prime mover's manual to find the correct method of operation.
	Hydraulic circuit of prime mover not working.	Call out a qualified fitter from the prime mover dealer.
	Hydraulic hoses fitted to the prime mover's auxiliary outlet QRC's wrong way round.	The post driver will only work if connected the correct way. It will only work with the pressure going down the pressure line and return going directly to tank.

5. Parts

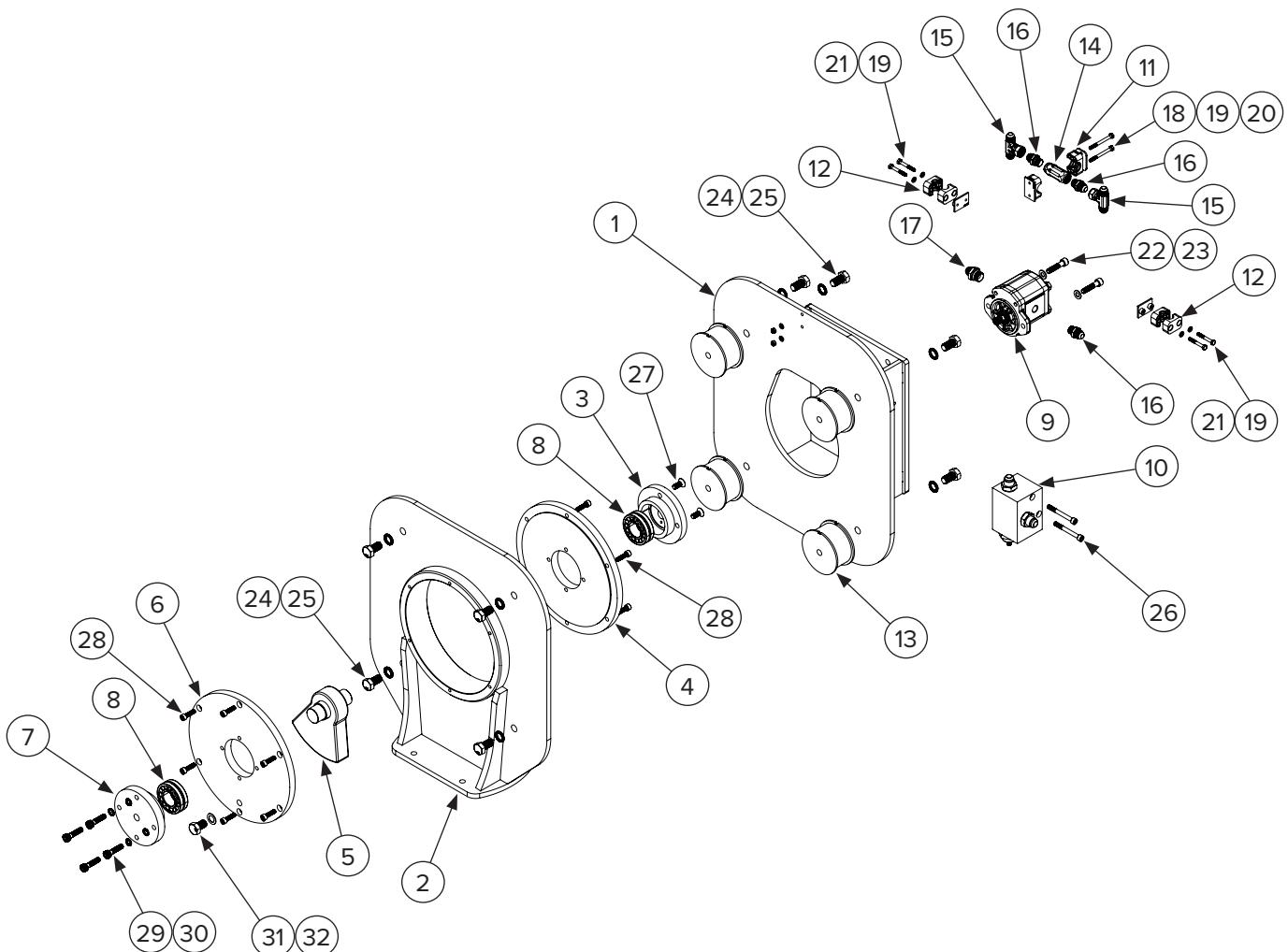
5.1 Main Parts Breakdown



ITEM	PART NUMBER	DESCRIPTION	QTY
1	See page 14	Non-Tilt Driver (not all hoses shown)	1
2	See page 16	Tilt Option (not all hoses shown)	1
3	299061	M12 X 1.75 X 45 mm Hex Head Bolt	4
4	299062	M12 Washer	8
5	299000	M12 X 1.75 Nylock Nut	4

5. Parts

5.2 Mechanical Parts



! IMPORTANT !

Do not disassemble before contacting Blue Diamond® Product Support. Disassembly voids Warranty.

5. Parts

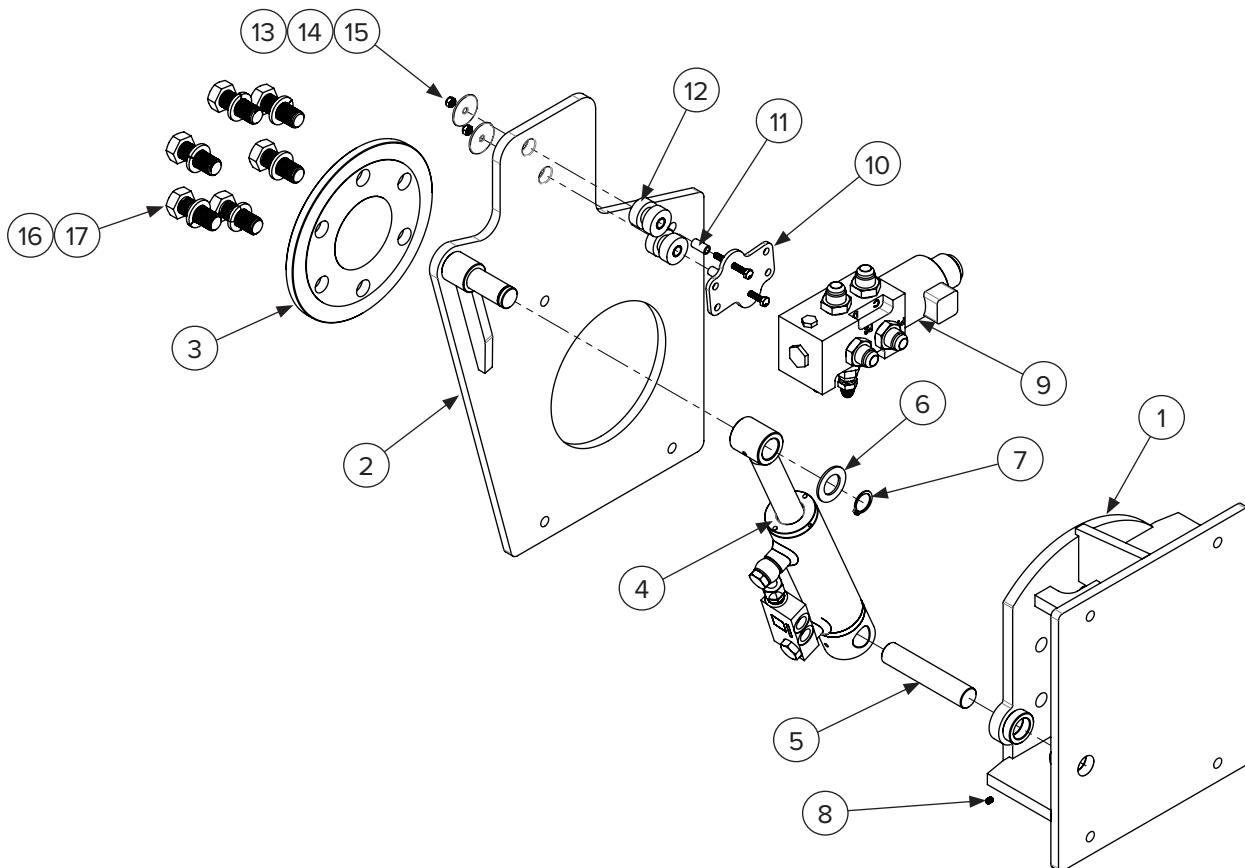
5.2 Mechanical Parts Cont'd

ITEM	PART NUMBER	DESCRIPTION	QTY
1	Not Available	Rear Housing Weldment	1
2	Not Available	Vibrator Housing Weldment (included in 200611)	1
3	Not Available	Vibrator Housing Rear Bearing Holder (included in 200611)	1
4	Not Available	Vibrator Housing Rear Cover Plate (included in 200611)	1
5	Not Available	Vibrator Eccentric Weight (included in 200611)	1
6	Not Available	Vibrator Housing Front Cover Plate (included in 200611)	1
7	Not Available	Vibrator Housing Front Bearing Holder Assembly (includes bearing) (included in 200611)	1
8	Not Available	Bearing (included in 200611)	2
9	200650	Motor	1
10	200534	Port Block Assembly (set to 45 LPM)	1
11	200529	Hose Clamp for 25mm Outside Diameter	1
12	200530	Hose Clamp for 18mm Outside Diameter	2
13	200575	Vibration Dampers	4
14	200516	3/8" One-Way Check Valve 3/8" Female BSPP to 3/8" Female BSPP 0.35 Bar Crack Pressure	1
15	295050-M08JIC-M08JIC-F08JICS	1/2" Male JIC to 1/2" Male JIC to 1/2" Female JIC Branch Tee Fitting	2
16	295010-M08JIC-M06BSPPW	1/2" Male JIC to 3/8" Male BSPP Dowty Seal Straight Fitting	3
17	295010-M08JIC-M08BSPPW	1/2" Male JIC to 1/2" Male BSPP Dowty Seal Straight Fitting	1
18	299074	M6 x 1.00 x 65mm Hex Head Bolt	2
19	299070	M6 Washer	6
20	299071	M6 x 1.00 Nylock Nut	2
21	299072	M6 x 1.00 x 45mm Hex Head Bolt	4
22	299031	M10 x 1.50 X 45mm Socket Head Bolt	2
23	299013	M10 Washer	2
24	299041	M16 x 2 x 30mm Hex Head Bolt	8
25	299110	M16 Wedge Lock Washer	8
26	299050	M8 x 1.25 x 75mm Socket Head Bolt	2
27	529393	M10 x 1.50 x 25 Countersunk Flat Head Allen Bolt	2
28	299015	M8 x 1.25 x 30mm Socket Head Bolt	12
29	299030	M10 x 1.50 x 40mm Socket Head Bolt	4
30	299100	M10 Wedge Lock Washer	4
31	299040	M16 x 2 x 25mm Hex Head Bolt	1
32	200537	5/8" Copper Sealing Washer	1
—	200611	Front Plate and Vibrator Assembly (includes 2, 3, 4, 5, 6, 7, 8, 22, 23, 24, 25, 27, 28, 29, 30, 31, 32)	AR

AR: As Required

5. Parts

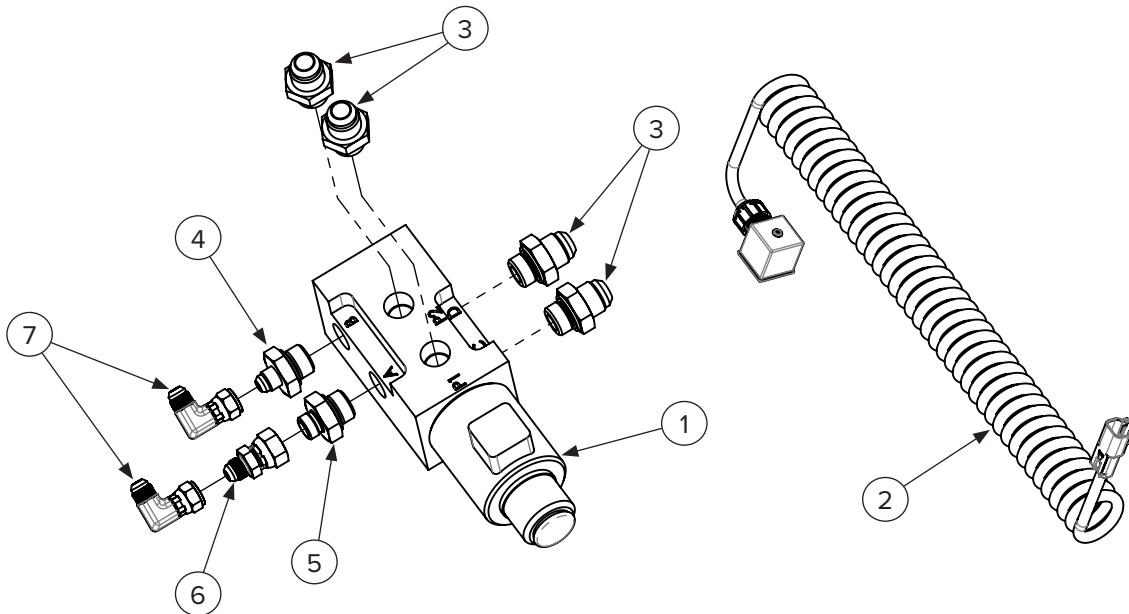
5.3 Tilt Option Mechanical Parts



ITEM	PART NUMBER	DESCRIPTION	QTY
1	200522	Swivel Housing Weldment	1
2	200523	Swivel Plate Weldment	1
3	200524	Swivel Disc Weldment (includes	1
4	See page XX	Cylinder Assembly	1
5	200527	Rear Cylinder Pin	1
6	299080	Cylinder Retaining Washer (rod end)	1
7	200538	Cylinder Retaining Snap Ring (rod end)	1
8	299002	M6 x 1.00 x 8mm Cylinder Pin Set Screw (body end)	1
9	200510	Solenoid Valve and Item #10 Mount Plate (fittings not included - see page 17)	1
10-15	200512	Solenoid Mount Kit (small solenoid)	1
10	Not Available	Solenoid Valve Mount Plate (sold with solenoid)	1
11	Not Available	Solenoid Mount Spacer Insert	2
12	Not Available	Solenoid Mount Vibration Dampers	2
13	299073	M6 x 1.00 X 50mm Hex Head Bolt	2
14	299714	1/4" Oversized Washer for Solenoid Mount	2
15	299071	M6 x 1.00 Nyloc Nut	2
16	299024	M20 x 2.50 x 50mm Hex Head Bolt	6
17	299023	M20 Lock Washer	6

5. Parts

5.4 Solenoid Detail View

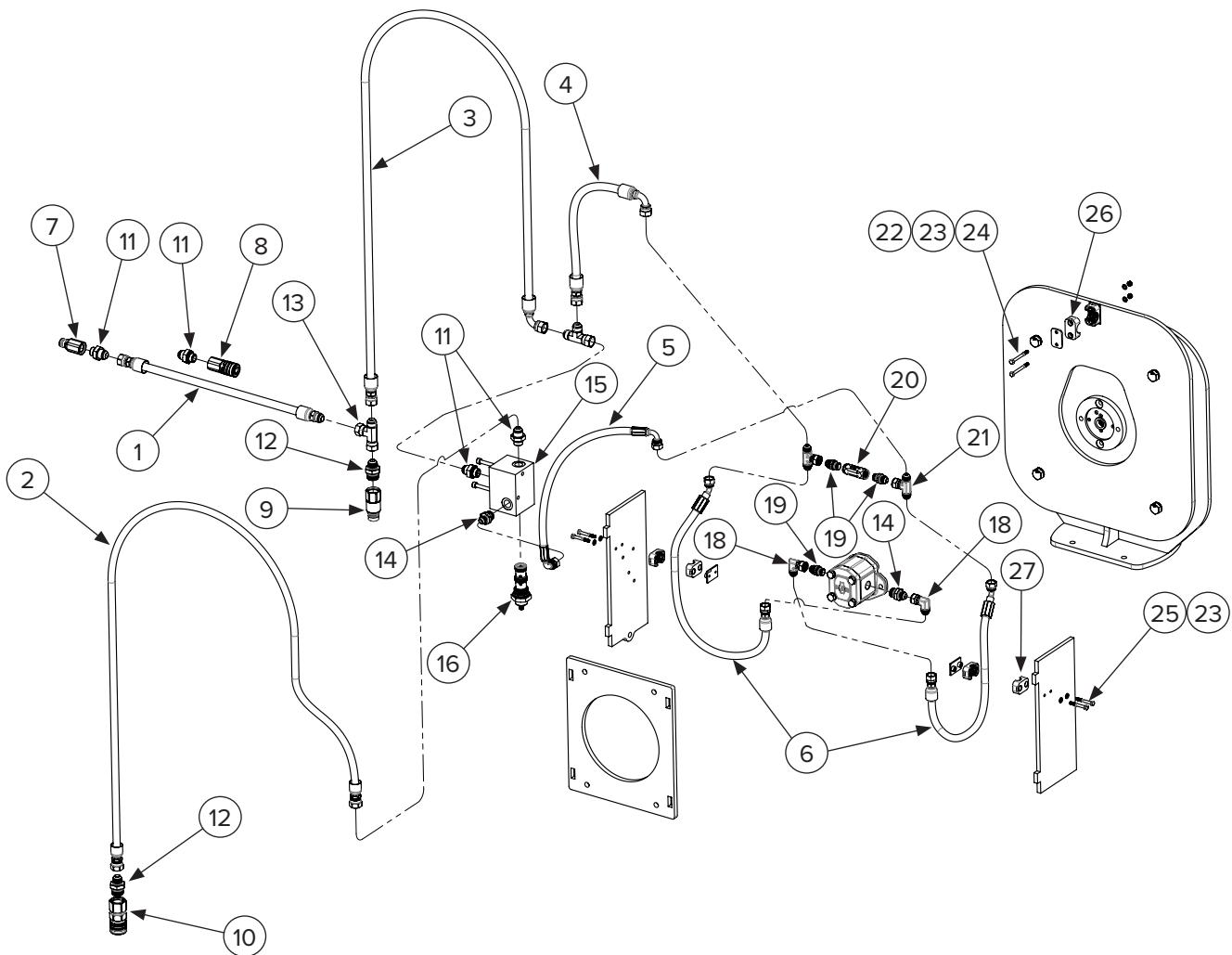


ITEM	PART NUMBER	DESCRIPTION	QTY
1	200510	Solenoid Valve (comes with Mount Plate) (no fittings)	1
2	200509	Solenoid Lead	1
3	295010-M10JIC-M08BSPPW	5/8" Male JIC to 1/2" BSPP Dowty Seal Straight Fitting	4
4	200550	3/8" Male JIC to 1/2" BSPP Dowty Seal Straight Fitting	1
5	200536	3/8" Male BSPP to 1/2" BSPP Straight Restricter Fitting	1
6	295010-M06JIC-F06BSPPS	3/8" Male JIC to 3/8" Female BSPP Swivel Straight Fitting	1
7	295030-M06JIC-F06JICS	3/8" Male JIC to 3/8" Female JIC 90 Degree Fitting	2
NS	295011-08	1/2" #8 Dowty Seal	1 or AR

AR: As Required

5. Parts

5.5 Non-Tilt Option Hydraulic Parts



5. Parts

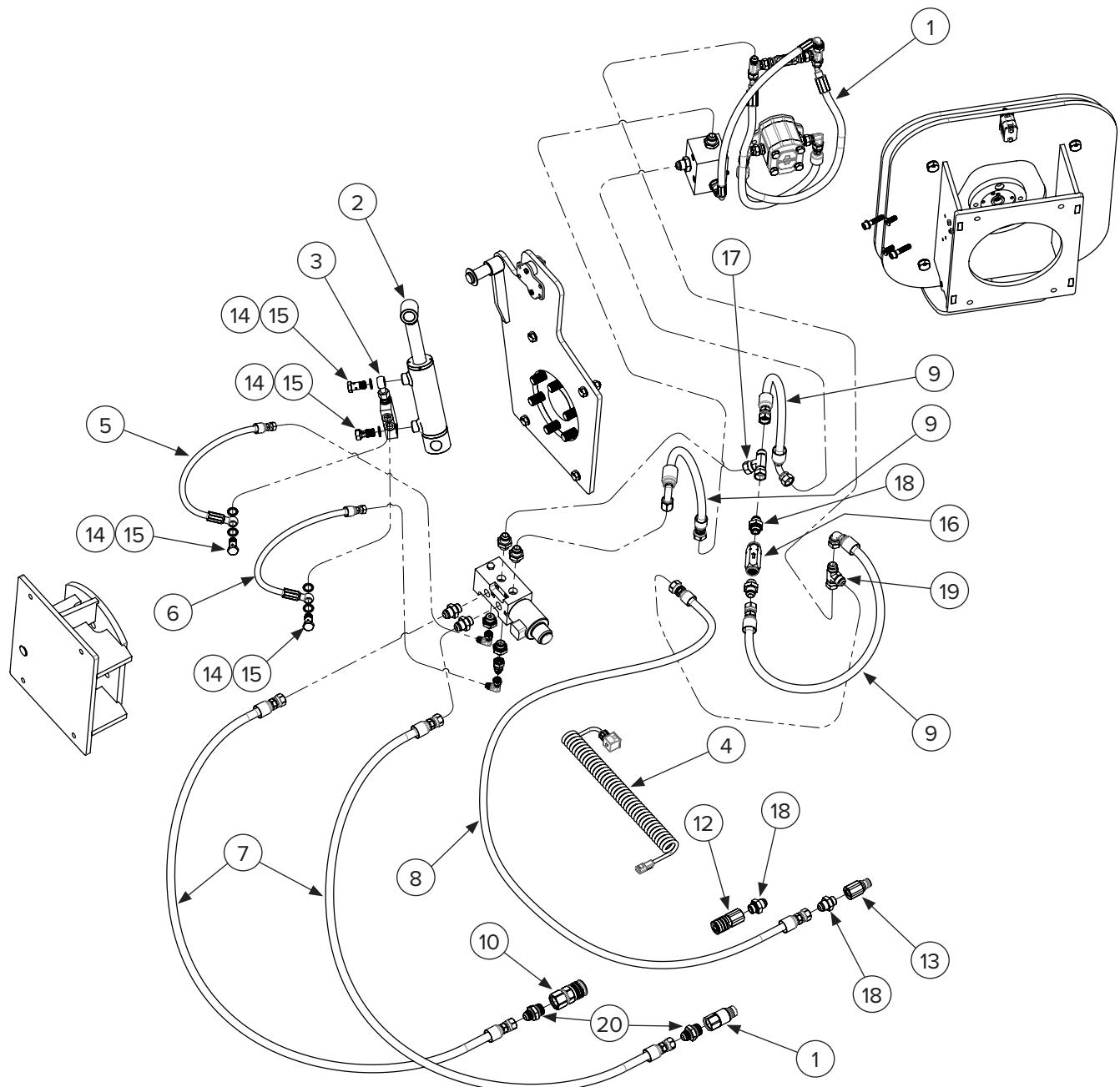
5.5 Non-Tilt Option Hydraulic Parts Cont'd

ITEM	PART NUMBER	DESCRIPTION	QTY
1	200520	Case Drain Hose	1
2	200514	Supply Line to Block Hose	1
3	200519	Block to Return Line Hose	1
4	200518	H-Valve to Return Line Hose	1
5	200508	Block to H-Valve Hose	1
6	200501	H-Valve to Motor Hose (spiral wrapped 500mm)	2
7	224069	Case Drain Male Coupler	1
8	224068	Case Drain Female Coupler	1
9	224014	Return Line Male Coupler	1
10	224013	Supply Line Female Coupler	1
11	295010-M10JIC-M08BSPPW	5/8" #10 JIC to 1/2" #8 BSPP Dowty Seal Straight Fitting	4
12	295010-M10JIC-M12BSPPW	5/8" #10 JIC to 3/4" #12 BSPP Dowty Seal Straight Fitting	2
13	200555	5/8" #10 Male JIC to 5/8" #10 Female JIC to 5/8" #10 Female JIC Run Tee	1
14	295010-M08JIC-M08BSPPW	1/2" #8 Male JIC to 1/2" #8 Male BSPP Dowty Seal Straight Fitting	2
15	200534	Port Block Assembly (comes with fittings and cartridge)	1
16	Not Available	Port Block Cartridge (set to 45 LPM) (only sold with Port Block Assembly)	1
17	295050-F10JIC-M10JIC-M10JIC	5/8" #10 Male JIC to 5/8" #10 Female JIC to 5/8" #10 Male JIC Run Tee	1
18	295030-M08JIC-F08JIC	1/2" #8 Male JIC to 1/2" #8 Female JIC 90 Degree Fitting	2
19	295010-M08JIC-M06BSPPW	1/2" Male JIC to 3/8" Male BSPP Dowty Seal Straight Fitting	3
20	200516	3/8" One-Way Check Valve 3/8" Female BSPP to 3/8" Female BSPP 0.35 Bar Crack Pressure	1
21	295050-M08JIC-M08JIC-F08JICS	1/2" Male JIC to 1/2" Male JIC to 1/2" Female JIC Branch Tee Fitting	2
22	299074	M6 x 1.00 x 65mm Hex Head Bolt	2
23	299070	M6 Washer	6
24	299071	M6 x 1.00 Nylock Nut	2
25	299072	M6 x 1.00 x 45mm Hex Head Bolt	4
26	200529	Hose Clamp for 25mm Outside Diameter	1
27	200530	Hose Clamp for 18mm Outside Diameter	2
NS	200571	3/8" #6 Bonded Washer Seal for BSPP Fittings	AR
NS	295011-08	1/2" #8 Bonded Washer Seal for BSPP Fittings	AR
NS	295011-12	3/4" #12 Bonded Washer Seal for BSPP Fittings	AR

AR: As Required

5. Parts

5.6 Tilt Option Hydraulic Parts



5. Parts

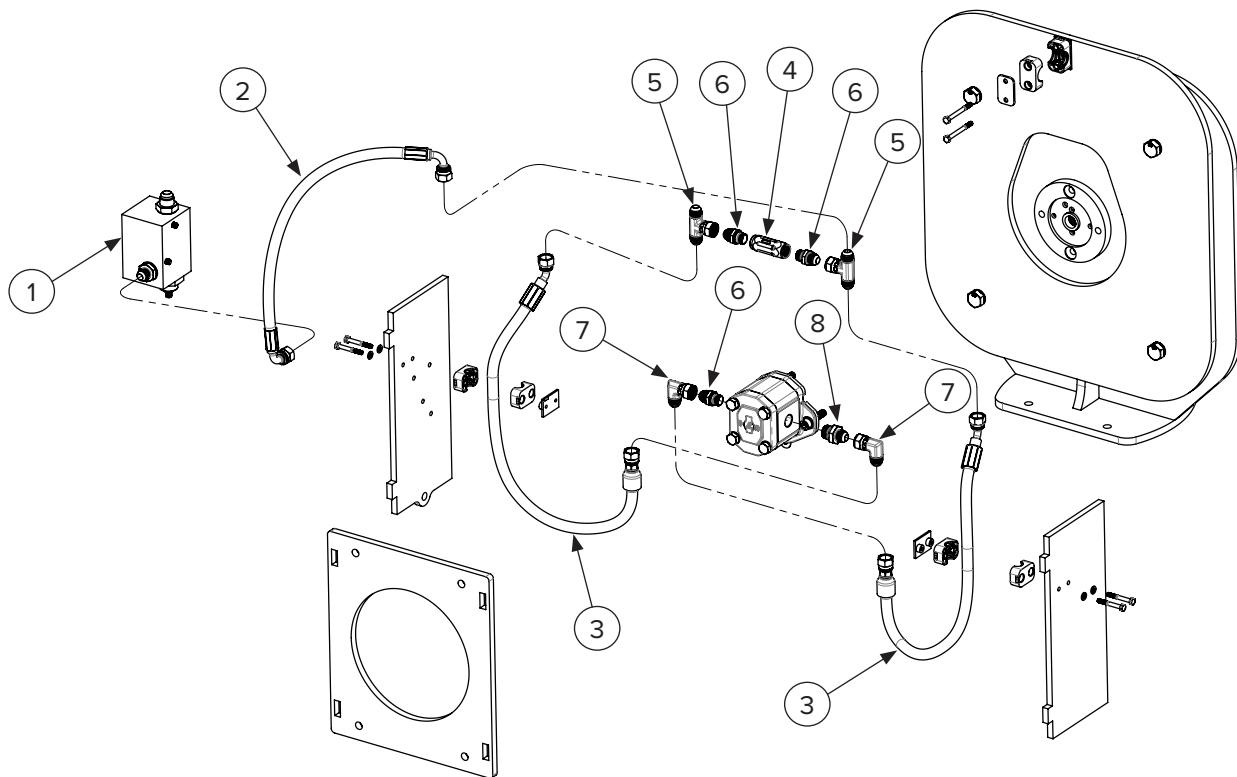
5.6 Tilt Option Hydraulic Parts Cont'd

ITEM	PART NUMBER	DESCRIPTION	QTY
1	See page 22	Tilt/Non-Tilt Common Hydraulic Parts	1
2	200525	Cylinder	1
3	200526	Cylinder Mounted Check Valve	1
4	200509	Solenoid Lead with Deutsch Connector	1
5	200503	Long Cylinder Hose	1
6	200502	Short Cylinder Hose	1
7	200504	Supply/Return Hose	1
8	200514	Case Drain Hose	1
9	200507	H-Valve to 1/2" Check Valve Hose and Both Solenoid to Port Block Hoses	3
10	224013	Supply Line Female Hydraulic Coupler	1
11	224014	Return Line Male Hydraulic Coupler	1
12	224068	Case Drain Female Hydraulic Coupler	1
13	224069	Case Drain Male Hydraulic Coupler	1
14	200570	3/8" #6 Banjo Bolt	4
15	200571	3/8" #6 Bonded Washer Seal for BSPP Fittings	6
16	200521	1/2" One-Way Check Valve 1/2" BSPP to 1/2" BSPP 0.35 Bar Crack Pressure	1
17	200555	5/8" #10 Male JIC to 5/8" #10 Female JIC to 5/8" #10 Female JIC Run Tee	1
18	295010-M10JIC-M08BSPPW	5/8" #10 Male JIC to 1/2" #8 Male BSPP Dowty Seal Straight Fitting	4
19	295050-F10JIC-M10JIC-M10JIC	5/8" #10 Male JIC to 5/8" #10 Female JIC to 5/8" #10 Male JIC Run Tee	1
20	295010-M10JIC-M12BSPPW	5/8" #10 Male JIC to 3/4" #12 Male BSPP Dowty Seal Straight Fitting	2
NS	295011-08	1/2" #8 Bonded Washer Seal for BSPP Fittings	AR
NS	295011-12	3/4" #12 Bonded Washer Seal for BSPP Fittings	AR

AR: As Required

5. Parts

5.7 Tilt / Non-Tilt Common Hydraulic Parts

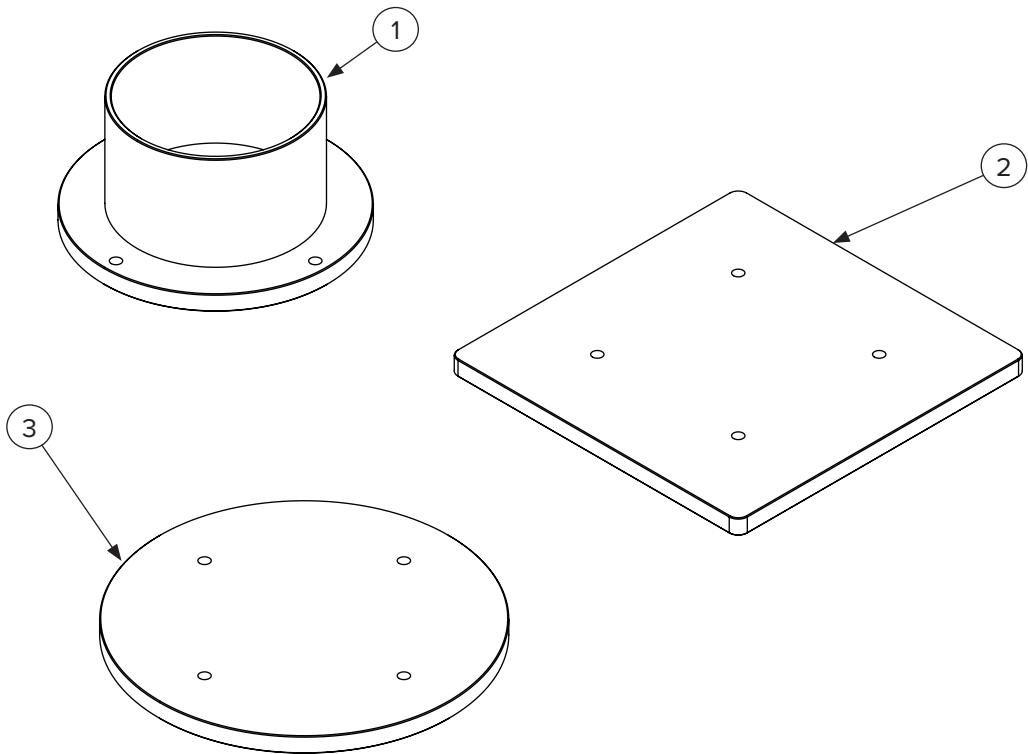


ITEM	PART NUMBER	DESCRIPTION	QTY
1	200534	Port Block Assembly	1
2	200508	Port Block to H-Valve Supply Line	1
3	200501	H-Valve to Motor Hose (spiral wrapped for 500mm)	2
4	200516	3/8" One-Way Check Valve 3/8" BSPP to 3/8" BSPP 0.35 Bar Crack Pressure	1
5	295050-M08JIC-M08JIC-F08JICS	1/2" Male JIC to 1/2" Male JIC to 1/2" Female JIC Branch Tee Fitting	2
6	295010-M08JIC-M06BSPPW	1/2" Male JIC to 3/8" Male BSPP Dowty Seal Straight Fitting	3
7	295030-M08JIC-F08JIC	1/2" #8 Male JIC to 1/2" #8 Female JIC 90 Degree Fitting	2
8	295010-M08JIC-M08BSPPW	1/2" Male JIC to 1/2" Male BSPP Dowty Seal Straight Fitting	1
NS	200571	3/8" #6 Bonded Washer Seal for BSPP Fittings	AR
NS	295011-08	1/2" #8 Bonded Washer Seal for BSPP Fittings	AR

AR: As Required

5. Parts

5.8 Post Adapter Cups



ITEM	PART NUMBER	DESCRIPTION	QTY
1	100516	4" Post Adapter	1
	100521	6" Post Adapter	1
	100526	9" Post Adapter	1
	100528	10" Post Adapter	1
	100531	12" Post Adapter	1
2	100552	12" Square Flat Plate	1
3	100553	12" Round Flat Plate	1
NS	299063	M12 X 1.75mm X 25mm Flange Bolt	4

6. Specifications

6.1 Attachment Specifications

DESCRIPTION	VIBRATING POST DRIVER
Centrifugal Force	10,116 ft/lbs at 50 Hz, Amplitude 2.10mm 4,945 ft/lbs at 35 Hz, Amplitude 3.75mm
Drive	Direct – Gear – Hydraulic Motor
Minimum Hydraulic Flow	7.4 GPM
Maximum Hydraulic Flow	26 GPM
Minimum Hydraulic Pressure	2400 PSI
Maximum Hydraulic Pressure	3000 PSI
Width	22"
Max Height	12"
Length	30"
Weight	355 lbs

6. Specifications

6.2 Torque Specifications

Standard Hardware and Lock Nuts

BOLT TYPE	CLASS 4.8		CLASS 8.8 OR 9.8		CLASS 10.9		CLASS 12.9	
Size	Lubricated	Dry	Lubricated	Dry	Lubricated	Dry	Lubricated	Dry
M6	4.8 N·m	6 N·m	9 N·m	11 N·m	13 N·m	17 N·m	15 N·m	19 N·m
	3.5 in / lb	4.5 in / lb	6.5 in / lb	8.5 in / lb	9.5 in / lb	12 in / lb	11.5 in / lb	14.5 in / lb
M8	12 N·m	15 N·m	22 N·m	28 N·m	32 N·m	40 N·m	37 N·m	47 N·m
	8.5 in / lb	11 in / lb	16 in / lb	20 in / lb	24 in / lb	30 in / lb	28 in / lb	35 in / lb
M10	23 N·m	29 N·m	43 N·m	55 N·m	63 N·m	80 N·m	75 N·m	95 N·m
	17 in / lb	21 in / lb	32 in / lb	40 in / lb	47 in / lb	60 in / lb	55 in / lb	70 in / lb
M12	40 N·m	50 N·m	75 N·m	95 N·m	110 N·m	140 N·m	130 N·m	165 N·m
	29 in / lb	37 in / lb	55 in / lb	70 in / lb	80 in / lb	105 in / lb	95 in / lb	120 in / lb
M14	63 N·m	80 N·m	120 N·m	150 N·m	175 N·m	225 N·m	205 N·m	260 N·m
	47 in / lb	60 in / lb	88 in / lb	110 in / lb	130 in / lb	165 in / lb	150 in / lb	190 in / lb
M16	135 N·m	175 N·m	260 N·m	330 N·m	375 N·m	475 N·m	440 N·m	560 N·m
	100 in / lb	125 in / lb	195 in / lb	250 in / lb	275 in / lb	350 in / lb	325 in / lb	410 in / lb
M18	135 N·m	175 N·m	260 N·m	330 N·m	375 N·m	475 N·m	440 N·m	560 N·m
	100 in / lb	125 in / lb	195 in / lb	250 in / lb	275 in / lb	350 in / lb	325 in / lb	410 in / lb
M20	190 N·m	240 N·m	375 N·m	475 N·m	530 N·m	675 N·m	625 N·m	800 N·m
	140 in / lb	180 in / lb	275 in / lb	350 in / lb	400 in / lb	500 in / lb	460 in / lb	580 in / lb
M22	260 N·m	330 N·m	510 N·m	650 N·m	725 N·m	925 N·m	850 N·m	1075 N·m
	190 in / lb	250 in / lb	375 in / lb	475 in / lb	540 in / lb	675 in / lb	625 in / lb	800 in / lb
M24	330 N·m	425 N·m	650 N·m	825 N·m	925 N·m	1150 N·m	1075 N·m	1350 N·m
	250 in / lb	310 in / lb	475 in / lb	600 in / lb	675 in / lb	850 in / lb	800 in / lb	1000 in / lb
M27	490 N·m	625 N·m	950 N·m	1200 N·m	1350 N·m	1700 N·m	1600 N·m	2000 N·m
	360 in / lb	450 in / lb	700 in / lb	875 in / lb	1000 in / lb	1250 in / lb	1150 in / lb	1500 in / lb
M30	675 N·m	850 N·m	1300 N·m	1650 N·m	1850 N·m	2300 N·m	2150 N·m	2700 N·m
	490 in / lb	625 in / lb	950 in / lb	1200 in / lb	1350 in / lb	1700 in / lb	1600 in / lb	2000 in / lb
M33	900 N·m	1150 N·m	1750 N·m	2200 N·m	2500 N·m	3150 N·m	2900 N·m	3700 N·m
	675 in / lb	850 in / lb	1300 in / lb	1650 in / lb	1850 in / lb	2350 in / lb	2150 in / lb	2750 in / lb
M36	1150 N·m	1450 N·m	2250 N·m	2850 N·m	3200 N·m	4050 N·m	3750 N·m	4750 N·m
	850 in / lb	1075 in / lb	1650 in / lb	2100 in / lb	2350 in / lb	3000 in / lb	2750 in / lb	3500 in / lb

**This page intentionally
left blank**



Warranty

MANUFACTURER'S LIMITED WARRANTY

BLUE DIAMOND® ATTACHMENTS, a manufacturer of quality attachments, warrants new BLUE DIAMOND® ATTACHMENTS products and/or attachments at the time of delivery to the original purchaser, to be free from defects in material and workmanship when properly set up and operated in accordance with the recommendations set forth by BLUE DIAMOND® ATTACHMENTS, LLC.

BLUE DIAMOND® ATTACHMENTS liability for any defect with respect to accepted goods shall be limited to repairing the goods at a BLUE DIAMOND® ATTACHMENTS designated location or at an authorized dealer location, or replacing them, as BLUE DIAMOND® ATTACHMENTS shall elect. The above shall be in accordance with BLUE DIAMOND® ATTACHMENTS warranty adjustment policies. BLUE DIAMOND® ATTACHMENTS obligation shall terminate twelve (12) months for the Vibratory Post Driver Series 2 after the delivery of the goods to original purchaser.

This warranty shall not apply to any machine or attachment which shall have been repaired or altered outside the BLUE DIAMOND® ATTACHMENTS factory or authorized BLUE DIAMOND® ATTACHMENTS dealership or in any way so as in BLUE DIAMOND® ATTACHMENTS judgment, to affect its stability or reliability, nor which has been subject to misuse, negligence or accident beyond the company recommended machine rated capacity.

WARRANTY CLAIM

To submit a warranty claim, a claim must be filed with BLUE DIAMOND® ATTACHMENTS before work is performed. The BLUE DIAMOND® PRODUCT SUPPORT TEAM will advise repairs and applicable parts exchanges. Tampering with the failed part may void the warranty. This warranty does not include freight or delivery charges incurred when returning machinery for servicing. Dealer mileage, service calls, and pickup/delivery charges are the customers' responsibility.

EXCLUSIONS OF WARRANTY

Except as otherwise expressly stated herein, BLUE DIAMOND® ATTACHMENTS makes no representation or warranty of any kind, expressed or implied, AND MAKES NO WARRANTY OF MERCHANTABILITY IN RESPECT TO ITS MACHINERY AND/OR ATTACHMENTS ARE FIT FOR ANY PARTICULAR PURPOSE. BLUE DIAMOND® ATTACHMENTS shall not be liable for incidental or consequential damages for any breach or warranty, including but not limited to inconvenience, rental of replacement equipment, loss of profits or other commercial loss. Upon purchase, the buyer assumes all liability for all personal injury and property resulting from the handling, possession, or use of the goods by the buyer.

No agent, employee, or representative of BLUE DIAMOND® ATTACHMENTS has any authority to bind BLUE DIAMOND® ATTACHMENTS to any affirmation, representation, or warranty concerning its machinery and/or attachments except as specifically set forth herein.

This warranty policy supersedes any previous documents.

NOTE: Blue Diamond® Attachments is a trademark of BLUE DIAMOND® ATTACHMENTS



QUALITY | DEPENDABILITY | INTEGRITY

Blue Diamond® Attachments
4512 Anderson Road, Knoxville, TN 37918
888-376-7027