BRADCO

OPERATOR'S AND PARTS MANUAL

PD4800 POST DRIVER

BRADCO
FFC
HARLEY
THE MAJOR
McMILLEN
SWEEPSTER
PALADIN LIGHT CONSTRUCTION

SERIAL NUMBER: _____

MODEL NUMBER: _____

Manual Number: OM730
Part Number: 75630
Rev.

800-922-2981 I www.paladinbrands.com P.O. Box 266, Delhi, IA 52223-0266, United States of America

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PREFACE

GENERAL COMMENTS

Congratulations on the purchase of your new BRADCO product! This product was carefully designed and manufactured to give you many years of dependable service. Only minor maintenance (such as cleaning and lubricating) is required to keep it in top working condition. Be sure to observe all maintenance procedures and safety precautions in this manual and on any safety decals located on the product and on any equipment on which the attachment is mounted.

This manual has been designed to help you do a better, safer job. Read this manual carefully and become familiar with its contents.

WARNING! Never let anyone operate this unit without reading the "Safety Precautions" and "Operating Instructions" sections of this manual.
Always choose hard, level ground to park the vehicle on and set the brake so the unit cannot roll.

Unless noted otherwise, right and left sides are determined from the operator's control position when facing the attachment.

NOTE: The illustrations and data used in this manual were current (according to the information available to us) at the time of printing, however, we reserve the right to redesign and change the attachment as may be necessary without notification.

BEFORE OPERATION

The primary responsibility for safety with this equipment falls to the operator. Make sure the equipment is operated only by trained individuals that have read and understand this manual. If there is any portion of this manual or function you do not understand, contact your local authorized dealer or the manufacturer.

SAFETY ALERT SYMBOL

This is the "Safety Alert Symbol" used by this industry. This symbol is used to warn of possible injury. Be sure to read all warnings carefully. They are included for your safety and for the safety of others working with you.

SERVICE

When servicing your product, remember to use only manufacturer replacement parts. Substitute parts may not meet the standards required for safe, dependable operation.

To facilitate parts ordering, record the model and serial number of your unit in the space provided on the cover of this manual. This information may be obtained from the identification plate located on the product.

The parts department needs this information to insure that you receive the correct parts for your specific model.

SAFETY STATEMENTS

THIS SYMBOL BY ITSELF OR WITH A WARNING WORD THROUGHOUT THIS MANUAL IS USED TO CALL YOUR ATTENTION TO INSTRUCTIONS INVOLVING YOUR PERSONAL SAFETY OR THE SAFETY OF OTHERS. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN INJURY OR DEATH.

DANGER — **THIS SIGNAL WORD IS USED WHERE SERIOUS INJURY OR DEATH WILL RESULT IF THE INSTRUCTIONS ARE NOT FOLLOWED PROPERLY.**

WARNING — **THIS SIGNAL WORD IS USED WHERE SERIOUS INJURY OR DEATH COULD RESULT IF THE INSTRUCTIONS ARE NOT FOLLOWED PROPERLY.**

CAUTION — **THIS SIGNAL WORD IS USED WHERE MINOR INJURY COULD RESULT IF THE INSTRUCTIONS ARE NOT FOLLOWED PROPERLY.**

NOTICE — **NOTICE INDICATES A PROPERTY DAMAGE MESSAGE.**

GENERAL SAFETY PRECAUTIONS

WARNING!

READ MANUAL PRIOR TO INSTALLATION

Improper installation, operation, or maintenance of this equipment could result in serious injury or death. Operators and maintenance personnel should read this manual, as well as all manuals related to this equipment and the prime mover thoroughly before beginning installation, operation, or maintenance. **FOLLOW ALL SAFETY INSTRUCTIONS IN THIS MANUAL AND THE PRIME MOVER'S MANUAL(S).**

READ AND UNDERSTAND ALL SAFETY STATEMENTS

Read all safety decals and safety statements in all manuals prior to operating or working on this equipment. Know and obey all OSHA regulations, local laws, and other professional guidelines for your operation. Know and follow good work practices when assembling, maintaining, repairing, mounting, removing, or operating this equipment.

KNOW YOUR EQUIPMENT

Know your equipment's capabilities, dimensions, and operations before operating. Visually inspect your equipment before you start, and never operate equipment that is not in proper working order with all safety devices intact. Check all hardware to ensure it is tight. Make certain that all locking pins, latches, and connection devices are properly installed and secured. Remove and replace any damaged, fatigued, or excessively worn parts. Make certain all safety decals are in place and are legible. Keep decals clean, and replace them if they become worn or hard to read.

GENERAL SAFETY PRECAUTIONS

WARNING! PROTECT AGAINST FLYING DEBRIS

Always wear proper safety glasses, goggles, or a face shield when driving pins in or out, or when any operation causes dust, flying debris, or any other hazardous material.

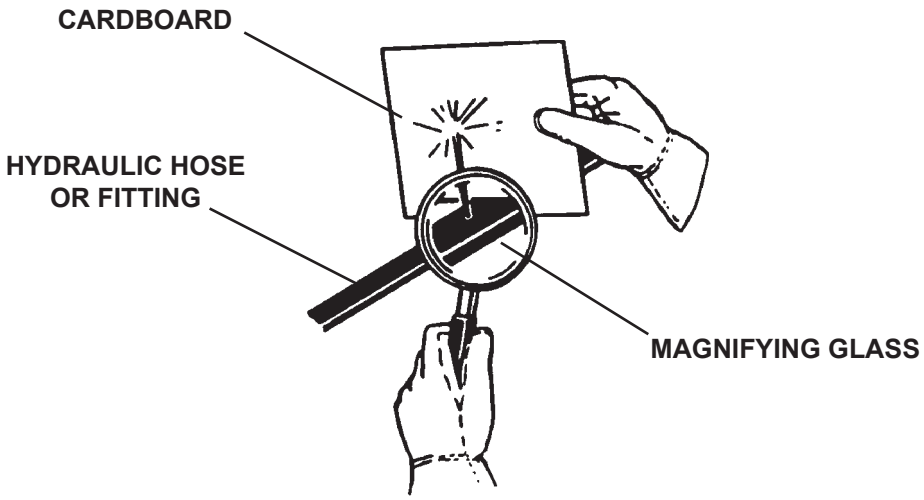
WARNING! LOWER OR SUPPORT RAISED EQUIPMENT

Do not work under raised booms without supporting them. Do not use support material made of concrete blocks, logs, buckets, barrels, or any other material that could suddenly collapse or shift positions. Make sure support material is solid, not decayed, warped, twisted, or tapered. Lower booms to ground level or on blocks. Lower booms and attachments to the ground before leaving the cab or operator's station.

WARNING! USE CARE WITH HYDRAULIC FLUID PRESSURE

Hydraulic fluid under pressure can penetrate the skin and cause serious injury or death. Hydraulic leaks under pressure may not be visible. Before connecting or disconnecting hydraulic hoses, read your prime mover's operator's manual for detailed instructions on connecting and disconnecting hydraulic hoses or fittings.

- Keep unprotected body parts, such as face, eyes, and arms as far away as possible from a suspected leak. Flesh injected with hydraulic fluid may develop gangrene or other permanent disabilities.
- If injured by injected fluid, see a doctor at once. If your doctor is not familiar with this type of injury, ask him to research it immediately to determine proper treatment.
- Wear safety glasses, protective clothing, and use a piece of cardboard or wood when searching for hydraulic leaks. **DO NOT USE YOUR HANDS! SEE ILLUSTRATION.**



GENERAL SAFETY PRECAUTIONS

WARNING!

DO NOT MODIFY MACHINE OR ATTACHMENTS

Modifications may weaken the integrity of the attachment and may impair the function, safety, life, and performance of the attachment. When making repairs, use only the manufacturer's genuine parts, following authorized instructions. Other parts may be substandard in fit and quality. Never modify any ROPS (Roll Over Protection Structure) or FOPS (Falling Object Protective Structure) equipment or device. Any modifications must be authorized in writing by the manufacturer.

WARNING!

SAFELY MAINTAIN AND REPAIR EQUIPMENT

- Do not wear loose clothing or any accessories that can catch in moving parts. If you have long hair, cover or secure it so that it does not become entangled in the equipment.
- Work on a level surface in a well-lit area.
- Use properly grounded electrical outlets and tools.
- Use the correct tools for the job at hand. Make sure they are in good condition for the task required.
- Wear the protective equipment specified by the tool manufacturer.

SAFELY OPERATE EQUIPMENT

Do not operate equipment until you are completely trained by a qualified operator in how to use the controls, know its capabilities, dimensions, and all safety requirements. See your machine's manual for these instructions.

- Keep all step plates, grab bars, pedals, and controls free of dirt, grease, debris, and oil.
- Never allow anyone to be around the equipment when it is operating.
- Do not allow riders on the attachment or the prime mover.
- Do not operate the equipment from anywhere other than the correct operator's position.
- Never leave equipment unattended with the engine running, or with this attachment in a raised position.
- Do not alter or remove any safety feature from the prime mover or this attachment.
- Know your work site safety rules as well as traffic rules and flow. When in doubt on any safety issue, contact your supervisor or safety coordinator for an explanation.

EQUIPMENT SAFETY PRECAUTIONS

WARNING! KNOW WHERE UTILITIES ARE

Observe overhead electrical and other utility lines. Be sure equipment will clear them. When digging, call your local utilities for location of buried utility lines, gas, water, and sewer, as well as any other hazard you may encounter.

WARNING! EXPOSURE TO RESPIRABLE CRYSTALLINE SILICA DUST ALONG WITH OTHER HAZARDOUS DUSTS MAY CAUSE SERIOUS OR FATAL RESPIRATORY DISEASE.

It is recommended to use dust suppression, dust collection and if necessary personal protective equipment during the operation of any attachment that may cause high levels of dust.

WARNING! REMOVE PAINT BEFORE WELDING OR HEATING

Hazardous fumes/dust can be generated when paint is heated by welding, soldering or using a torch. Do all work outside or in a well ventilated area and dispose of paint and solvent properly. Remove paint before welding or heating.

When sanding or grinding paint, avoid breathing the dust. Wear an approved respirator. If you use solvent or paint stripper, remove stripper with soap and water before welding. Remove solvent or paint stripper containers and other flammable material from area. Allow fumes to disperse at least 15 minutes before welding or heating.

OPERATING THE POST DRIVER

- Operate only from the operator's station.
- Keep fingers away from the inside of the machine at all times. Moving parts inside of the post driver could cause severe injury.
- Do not exceed the lift capacity of the prime mover.
- When operating on slopes, position the post driver uphill. Avoid steep hillside operation, which could cause the prime mover to overturn.
- Reduce speed when driving over rough terrain, on a slope, or turning, to avoid overturning the vehicle.
- An operator must not use drugs or alcohol, which can change his or her alertness or coordination. An operator taking prescription or over-the-counter drugs should seek medical advice on whether or not he or she can safely operate equipment.
- Before exiting the prime mover, lower the post driver to the ground, turn off the prime mover's engine, remove the key and apply the brakes.

TRANSPORTING THE POST DRIVER

- When driving on public roads use safety lights, reflectors, Slow Moving Vehicle signs etc., to prevent accidents. Check local government regulations that may affect you.
- Do not drive close to ditches, excavations, etc., cave in could result.
- Carry the unit low during transporting for maximum stability and visibility.
- Avoid steep slopes or unstable surfaces. If you must drive on a slope, keep the load low and proceed with extreme caution. Do not drive across a steep slope under any circumstances. Drive straight up and down the slope.
- Do not smoke when refueling the prime mover. Allow room in the fuel tank for expansion. Wipe up any spilled fuel. Secure cap tightly when done.

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EQUIPMENT SAFETY PRECAUTIONS

MAINTAINING THE POST DRIVER

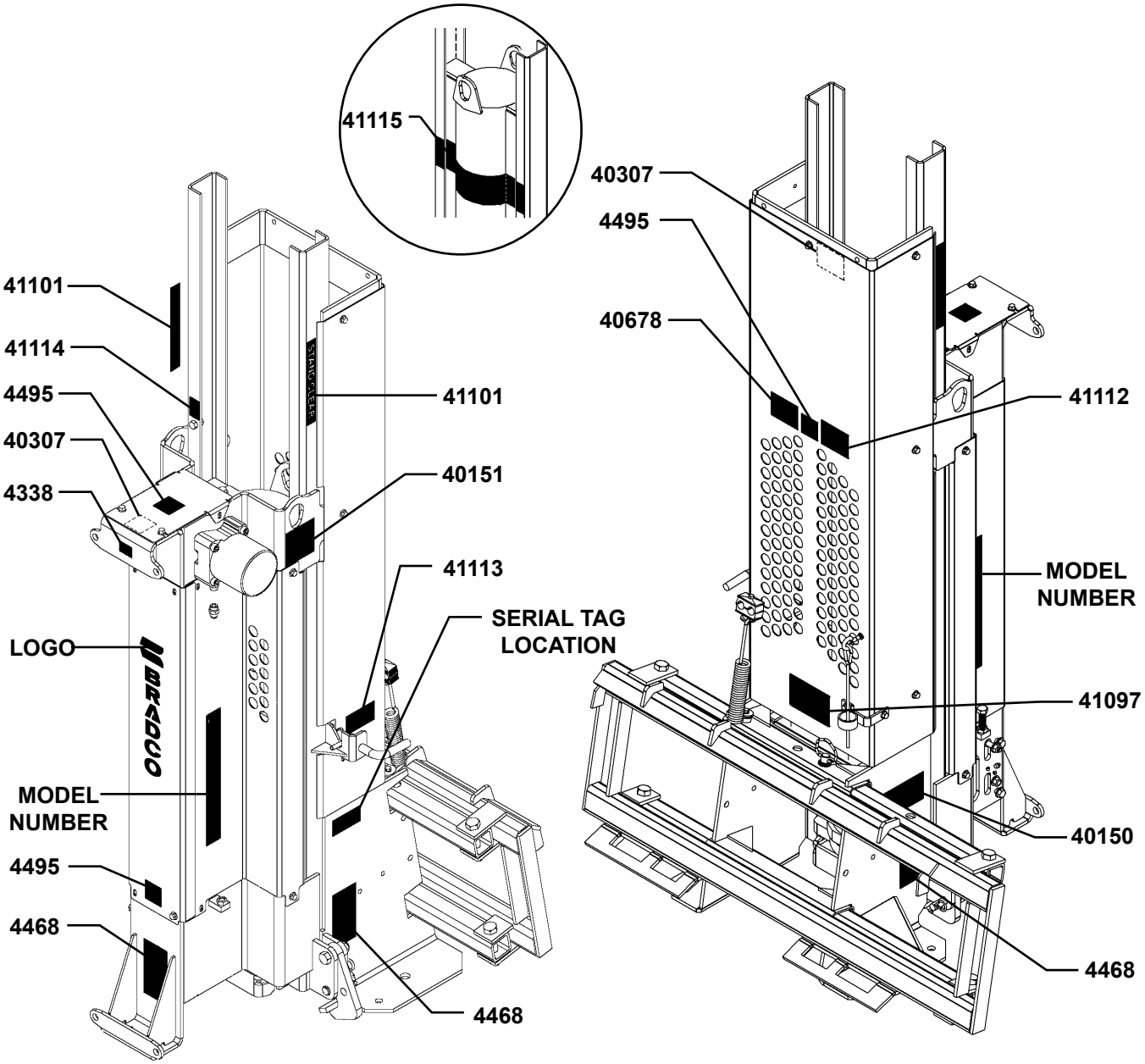
- Before performing maintenance make sure the weight is completely lowered, lower the attachment to the ground, turn off the engine, remove the key and apply the brakes.
- Never perform any work on the attachment unless you are authorized and qualified to do so. Always read the operator service manuals before any repair is made. After completing maintenance or repair, check for correct functioning of the attachment. If not functioning properly, always tag “DO NOT OPERATE” until all problems are corrected.
- Worn, damaged, or illegible safety decals must be replaced. New safety decals can be ordered from BRADCO.
- Never make hydraulic repairs while the system is under pressure. Serious personal injury or death could result.
- Never work under a raised attachment.

DECALS

DECAL PLACEMENT

GENERAL INFORMATION

The diagrams on this page show the location of all the decals used on the PD4800 Post Driver. The decals are identified by their part numbers, with the reductions of the actual decals located on the following pages. Use this information to order replacements for lost or damaged decals. Be sure to read all decals before operating the post driver. They contain information you need to know for both safety and attachment longevity. All logo's and model numbers can be purchased from your local dealer.



IMPORTANT: Keep all safety decals clean and legible. Replace all missing, illegible or damaged safety decals. When replacing parts with safety decals attached, the safety decals must also be replaced.

REPLACING SAFETY DECALS: Clean the area of application with a nonflammable solvent, then wash the same area with soap and water. Allow the surface to dry. Remove the backing from the safety decal, exposing the adhesive surface. Apply the safety decal to the position shown in the diagram above, and smooth out any bubbles.

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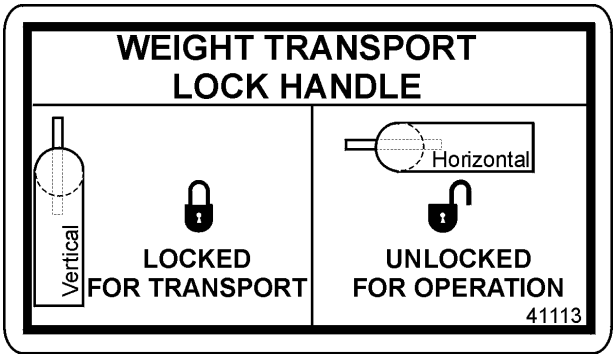
DECALS



PART #41113
WEIGHT TRANSPORT LOCK

PART #4338
MADE IN USA

PART #41114
REMOVE SHIPPING BOLT

PART #41097
CAUTION! DO NOT DRYFIRE

PART #40678
WARNING! BEFORE LEAVING SEAT

PART #40151
WARNING! HIGH PRESSURE FLUID

PART #40307
DANGER! GUARD MISSING

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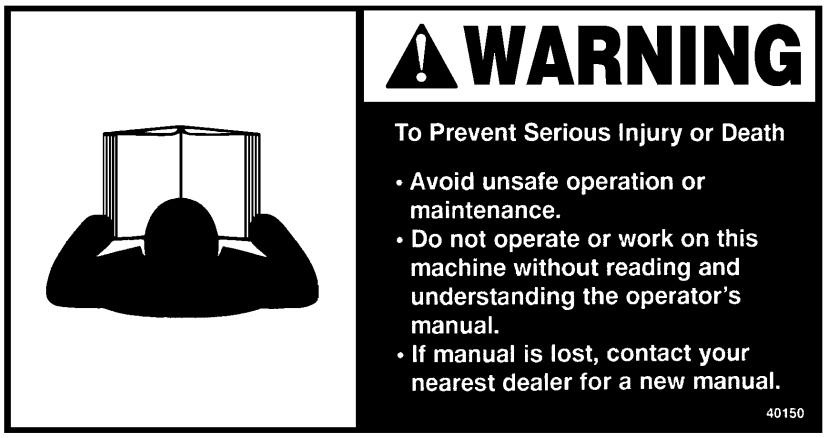
DECALS



PART #40150
WARNING! READ MANUAL

PART #4495
WARNING! GUARDS

PART #41101
DANGER! STAND CLEAR

PART #4468
WARNING! FOOT CRUSH

PART #41112
WARNING! CRUSH OR SEVER HAZARD

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INSTALLATION

PREPARING THE PRIME MOVER

Your skid steer may require a counter weight kit to ensure that the weight of the post driver does not exceed the rated capacity of your loader. (Contact your local dealer if mounting the post driver onto a different skid steer than it was originally purchased for to verify if a counterweight is required.)

ADDITIONAL WEIGHT

Adding additional weight is recommended except when using a T-post adapter. The hammer weighs 289 lbs. empty and weight can be added up to a total hammer weight of 600 lbs. There are various options available for adding weight, for example: logging chain, metal punch slugs, lead tire weights, etc. Do not use concrete, sand or metal shot.

OPTIONS

A complete collar assembly must be ordered separately when purchasing the PD4800 Post Driver with additional collars available for mounting into the collar assembly.

Collar Assembly	**Part Number**
With 8” Square Collar	112491
With 6” Square Collar	112492
With 3.5” Square Collar	112493
With 6” X 8” Rectangular Collar	112494

Collar ONLY	**Part Number**
3” Round	19964
3.5” Square	88812
4” Round	19965
4” X 6” “H” Beam	88815
6” Round	88813
8” Round or 8” Square	32712
6” X 8” Rectangular	89147
6” Square	89413

Hose Kits	**Part Number**
80” Long Hoses / .50” Body FF Couplers	112919
(Recommended when installing onto the Heavy Duty Tilt Attach.)	
108” Long Hoses / .50” Body FF Couplers	112920
136” Long Hoses / .50” Body FF Couplers	113351

Valve Kit	**112921**
(Required when mounting the PD4800 Post Driver onto the Bradco Tilt Attach.)	

Electrical Control Box	**15756**
(Contact factory for availability of in-cab electrical controls.)	

INSTALLATION

After determining the rated capacity of your loader and adding any counterweight required you are ready to install your post driver.

INSTALLATION INSTRUCTIONS:

1. Remove the shipping banding from around the post driver and pallet.

2. The post driver frame was designed for attaching lift hooks. Using your skid steer loader or a hoist, attach a lift hook to the frame in the post driver and slowly lift the attachment into a vertical position for installation.

NOTE: Verify that the attachment is stable before removing the lift hooks.

3. Attach the post driver to your skid steer loader by following your skid steer operator's manual for installing an attachment. Verify that the post driver is securely latched to your skid steer.

4. If your hydraulic hoses were not connected to the post driver at the factory, connect the hoses to the two straight connectors (at the hydraulic motor) followed by the hydraulic couplers.

NOTE: Verify that the check valve is installed into the motor port towards the front of the attachment and install the male coupler to the hose coming from the check valve.

5. Route the hoses through the hose clamp and up to the auxiliary hydraulics on your prime mover.

6. Remove the shipping bolt from the top left hammer rail. This bolt is used for shipping purposes only.

NOTICE! Do not operate with the shipping bolt installed. Damage to the attachment could occur.

7. Grease the hammer rails.

8. Check chain rotation by slowly engaging the auxiliary hydraulics and verify that the chain is rotating from the bottom to the top (from the operator's seat) and therefore lifting the hammer. If the hammer does not start to lift, check hydraulic connections and reverse the hoses at the skid steer end. Recheck chain rotation.

   Your PD4800 Post Driver is ready for operation.

OPERATION

GENERAL INFORMATION

After reading all of the Safety Precautions and Installation sections of this manual you are ready to operate your Post Driver.

1. The basic post driver requires a second person to position the fence post. This person will set the post at the desired location and grasp the post securely making sure his/her hands are at least 30” from the top of the post.

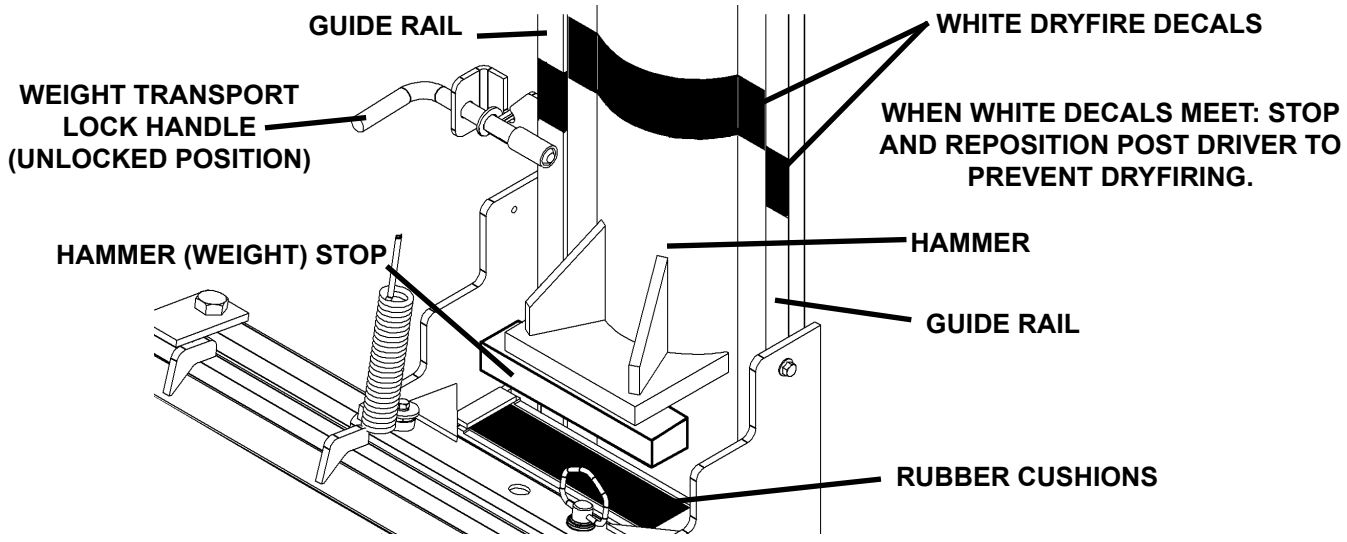
2. Once the post is in position and the weight lock handle is “unlocked”, the skid steer operator can move the skid steer into position with the loader arms raised and the post driver positioned directly over the top of the fence post.

3. Lower the post driver onto the top of the fence post (ensuring that the post is inside of the positioning collar) keep lowering until the collar and collar assembly has moved up approximately 2 inches. This can be measured by watching the location of the hammer which is visible from the operator’s seat.

WARNING! After the post is in position, the second person must move away from the post driver and the skid steer. Personal injury could occur.

4. Once the post is in position and the second person has cleared the area, continue lowering the post driver onto the post approximately 24 inches.

5. The post driver can now be activated by turning the auxiliary hydraulics to the forward or locking position. Drive the post into the ground until the stop on the hammer (weight) is approximately 6” above the rubber cushions on the safety stop block. (This can be measured by monitoring the white dryfire decals located on the back of the hammer and the guide rails. When the white guides meet, you have approximately 6” before the stops contact each other (dryfire).



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6. Shut off the auxiliary hydraulics and reposition the skid steer to ensure that the post is driven into the ground “STRAIGHT”.

7. Repeat steps #4 through #6 until the post has been driven to the desired depth.

8. Shut off the auxiliary hydraulics and raise the post driver until the post is cleared and move on to the next post.

WARNING!  **Failure to lower the post driver as the hammer stop nears the rubber cushions on the safety stop block will result in the hammer bottoming out (dryfire). Although an occasional dryfire will give the operator a jolt it will not under normal conditions damage the post driver. HOWEVER, repeated dryfiring will cause structural damage and excessive wear to the post driver and skid steer arms.**

REMOVAL

To remove the PD4800 Post Driver just follow the simple procedure outlined below. Remember, always position the skid steer loader on hard and level ground when the unit is to be removed.

1. Lower the post driver to the ground.
2. Following all standard safety practices and the instructions for disconnecting an attachment in your skid steer operator’s manual, disconnect the post driver from your skid steer.
3. Following Safety Shut Down Procedures: stop the engine, set the parking brake and remove the key.
4. Relieve any pressure in the hydraulic lines. Disconnect the power and return hoses from the auxiliary hydraulics and connect the hydraulic couplers together to prevent contaminants from entering the hydraulic system.
5. Place the hoses off the ground and in a safe position to prevent damage.

STORAGE

To prepare the post driver for storage, first wash off all dirt and grime from the unit. Lubricate the drive chain and all grease fittings. Make sure the hydraulic system is properly sealed against contaminants entering the unit. When storing the driver, place the unit in a clean, dry place with a cover over it if possible.

MAINTENANCE AND SERVICE

GENERAL INFORMATION

Your post driver was designed to be virtually maintenance free. Very little effort is required to keep it in top condition. It is however, important to follow these procedures to get full performance and longevity out of the unit.

WARNING! Before performing general maintenance make sure the weight is completely lowered, lower the attachment to the ground, turn off the engine, remove the key and apply the brakes.

DAILY INSPECTION

- Check hydraulic hoses for damage, leakage or signs of excessive heat. Replace if necessary.
- Check all bolts for tightness.
- Visually inspect the machine for damage.
- Visually check drive chain alignment.
- Visually inspect the rubber cushions on the stop block for damage and wear. (Repeated bottoming out of the unit is the only cause of wear or damage to the rubber cushions. If Cushions are showing wear or damage, check complete unit for structural damage and review operating procedures.)

LUBRICATION - EVERY 40 HOURS

- Grease the fittings on each of the bearings located at the bottom of the drive assembly.
- Lubricate hammer rails.
- Lubricate drive chain with a high quality commercial chain lubricant.
- Visually inspect nylon wear plates. Replace when drive chain is hitting the flathead socket capscrews.
- Check collar assembly bolts for tightness.

MAINTENANCE AND SERVICE

CHAIN TENSIONING

After a break-in period of 8 hours it is recommended that you check the chain tension. To check or adjust the chain, position the post driver on a hard level surface. Lower the weight completely, turn off the engine, remove the key and apply the brakes.

1. Remove the front cover.
2. Place a straight edge along the chain from sprocket to sprocket. Push down with your fingers and there should be approximately 1/2” of deflection. If there is more deflection than 1/2” your chain will need to be tightened.
3. Loosen the four .50” X 1.50” capscrews on both bearing mounting plates. Turn the chain adjustment bolt (loosen the jam nut) until you have achieved the recommended chain tension.

NOTE: It is very important to adjust both chain adjustment bolts equally (tighten the jam nut). To help verify equal tension on both sides, measure from the post driver frame to the center of the bearing shaft. This measurement should be the same on each side.

4. Tighten the .50” X 1.50” capscrews.

REPLACING MOTOR

To replace the motor, position the post driver on a hard level surface with a hoist available for supporting the chain. Lower the weight completely, turn off the engine, remove the key and apply the brakes.

1. Tag and disconnect hydraulic hoses and fittings.
2. Remove the front and top chain covers.
3. Loosen chain by loosening the four .50” X 1.50” bolts on the bearing mounting plates.
4. Back off the chain adjusting screws on each side equally.
5. Attach a hoist to the top of the chain for support. Remove the existing motor by removing the four sockethead capscrews securing it to the frame, and the .38” bolt on the end of the motor shaft. Loosen the set screw located on the sprocket. Slowly and carefully remove the motor from the frame. Take extra care keeping the chain supported and remember that once the motor is removed the sprocket is no longer locked in place.
6. Check key and sprocket for wear. Replace if necessary.

NOTE: If replacing the sprocket due to wear, it is recommended that you replace both the upper and lower sprocket at the same time and inspect the chain for excessive wear. Since these three components all interact, when one becomes worn the others do also.

7. Install new motor by re-installing the sockethead capscrews and the .38” bolt removed in Step #5. Be sure to align the key and sprocket with the keyway in the motor shaft.

8. Tighten chain by following the “CHAIN TENSIONING” instructions.
9. Verify that both sprockets are parallel and that the chain is running inline.
9. Reinstall the front and top chain covers.
10. Reinstall hoses and fittings. **NOTE: Be sure check valve is towards the front of the machine.**

REPLACING BEARINGS

To replace the bearings or complete bearing housing, position the post driver on a hard level surface. Lower the weight completely, turn off the engine, remove the key and apply the brakes.

1. Remove the front cover.
2. Loosen chain by loosening the four .50” X 1.50” bolts on the bearing mounting plates.
3. Back off the chain adjusting screws on each side equally.
4, Loosen the two set screws and remove the locking collar from the bearing/housing to be replaced.
5. Remove bearing housing. If replacing the complete bearing and housing assembly, go to Step # 7.

NOTE: If the bearing is “frozen” to the bearing pin it may be necessary to loosen the set screws securing the sprocket to the pin and drive the pin out of the bearing. If the sprocket was loosened and the pin driven out, verify that both sprockets are parallel and that the chain is running inline when the pin is reinstalled.

NOTE: Inspect the opposite bearing and replace both at the same time if required.

6. Press the old bearing out of the housing and press the new bearing in.

NOTE: It may be necessary to use a soft mallet or pipe on the inner race only, to reach the correct position. Never pound on or apply pressure to the outer race. Once the bearing is in position, precision alignment can be achieved by first fixing the housing in place and then simultaneously rotating and tapping the shaft with a soft mallet.

7. Position the bearing assembly onto the shaft and install the locking collar, using a spanner wrench or punch to lock the collar in place. (Always lock the collar in the direction of shaft rotation.) Tighten the set screws to 126 ft. lbs.
8. Tighten the chain. See “CHAIN TENSIONING”.
9. Install the front cover.

REPLACING DRIVE CHAIN

To replace the chain, position the post driver on a hard level surface with a hoist available for supporting the chain. Lower the weight completely, turn off the engine, remove the key and apply the brakes.

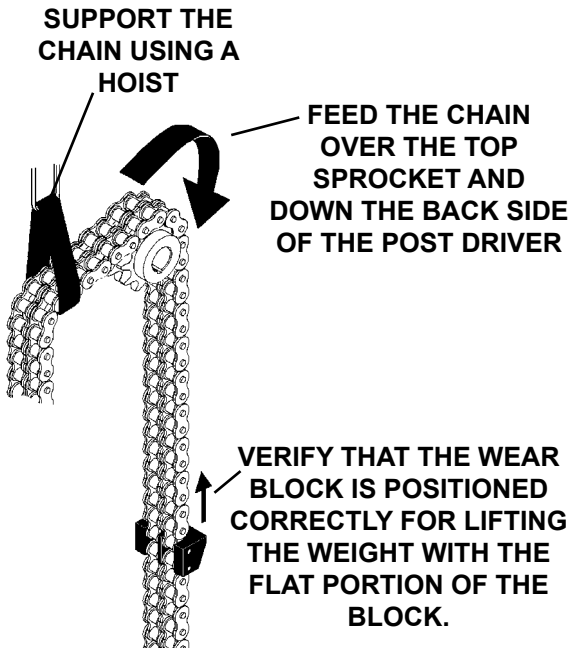
1. Remove the front and top chain covers.
2. Loosen chain by loosening the four .50” X 1.50” bolts on the bearing mounting plates.
3. Back off the chain adjusting screws on each side equally.
4. Position the master link to the front and approximately 12” up from the lower sprocket. Attach a hoist to the top of the chain for support and remove the master link.
5. Using the hoist, lift the chain off of the unit and set aside.

NOTE: If replacing the chain due to wear, it is recommended that you replace both the upper and lower sprockets at the same time. Since these three components all interact, when one becomes worn the others do also.

6. Check the rubber cushions at the back of the unit and replace if necessary.
7. Attach the hoist to the lift hook locations on the weight and lift the weight to gain access to the wear block on the front bottom portion of the weight. Check wear block and replace if necessary. Lower weight back into the frame.

NOTE: The wear block can be turned 180° (front to back, not top to bottom) and reinstalled.

8. Lift the new chain with the hoist and feed it over the top of the top sprocket and down the backside and around the bottom of the bottom sprocket in the direction shown. Using a chain puller or other appropriate devise, pull the two ends of the chain together and reinstall the master link. **NOTE: Installation of the chain backwards may result in excessive wear and possible binding of the chain and weight due to the position of the wear block.**
9. Tighten chain by following the “CHAIN TENSIONING” instructions.
10. Verify that both sprockets are parallel and that the chain is running inline.
11. Reinstall the front and top chain covers.



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MAINTENANCE AND SERVICE

REPLACING THE WEAR BLOCK ON THE CHAIN

To replace the wear block, position the post driver on a hard level surface with a hoist available for supporting the chain. Lower the weight completely, turn off the engine, remove the key and apply the brakes.

1. Remove the chain from the unit by following Steps #1 through #5 under “REPLACING THE DRIVE CHAIN” instructions.
2. Place the chain on a suitable workbench and remove the welds on the ends of the retaining pins.
3. Drive the pins out and remove the worn or damaged wear block.
4. Install the new block and pin assembly in the same location.
5. Tack weld the pins into the block to prevent them from inadvertently falling out during operation.
6. Check the remaining wear blocks and rubber cushions and reinstall the chain into the unit by following Steps #6 through #11 under “REPLACING THE DRIVE CHAIN” instructions.

REPLACING THE RUBBER CUSHIONS

To replace the rubber cushions, position the post driver on a hard level surface with a hoist available for supporting the weight. Lower the weight completely, turn off the engine, remove the key and apply the brakes.

1. **Securely** attach the hoist to the lifting hook location on the post driver weight.
2. Lift the weight and replace the rubber cushions.
3. Lower the weight and remove the lift hooks.

CHANGING THE COLLAR AND /OR COLLAR ASSEMBLY

To change the collar or collar assembly, position the post driver flat on the front or “face” of the unit. (Take care when laying the unit down that the hoses do not become tangled or stretched.) Turn off the engine, remove the key and apply the brakes.

1. Remove the clevis pin from both collar stops on the bottom of the unit.
2. Open the collar stops and remove the collar assembly.
3. If not installing a complete new collar assembly, change the collar on the collar assembly.
4. Install the collar assembly back into the unit with the striker plate towards the weight and the collar towards the skid steer. Lock the collar assembly into place and return the post driver to a vertical position.

NOTE: If installing the 8” square collar the long side of the collar must be down, towards the front of the unit.

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	POSSIBLE REMEDY
Motor will not operate.	Auxiliary hoses not hooked up to skid steer.	Engage Couplers
	Auxiliary hoses hooked up incorrectly.	Reverse hoses at skid steer end.
	Obstruction in hydraulic line.	Remove obstruction and replace if necessary.
	Hydraulic motor damage or seals blown.	Contact Paladin service department.
	Skid steer auxiliaries not engaged.	Engage auxiliary valve.
	Unit is completely bound up.	Inspect unit and remove obstruction.
Motor runs but chain won't lift weight.	Broken or missing shaft key.	Replace key
	Unit is completely bound up.	Inspect unit and remove obstruction.
	Slide channels aren't lubricated.	Grease unit.
	Motor damaged.	Check pressure. Repair or replace as needed.
	Obstruction in hydraulic lines.	Remove obstruction and replace if necessary.
	Lower bearings damaged.	Replace bearings.
Excessive chain wear.	Incorrect chain tension.	Adjust chain tension.
	Sprockets are not aligned or are worn.	Correct alignment or replace.
	Chain and slide channels dry and binding.	Lubricate chain and slide channels.
Excessive noise.	Incorrect chain tension.	Adjust chain tension.
	Sprockets and/or chain are worn.	Replace sprockets and/or chain.
	Wear plates or wear block on chain worn.	Inspect and replace as necessary.

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TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	POSSIBLE REMEDY
Chain jumps.	Incorrect chain tension.	Adjust chain tension.
	Sprockets and/or chain are worn.	Replace sprockets and/or chain.
	Wear plates or wear block on chain worn.	Inspect and replace as necessary.
Unit runs slow and gets hot.	Insufficient hydraulic flow.	Refer to skid steer owners manual.
	Obstruction in hydraulic lines.	Remove obstruction and replace if necessary.
Weight drops slowly.	Slide channels binding.	Grease unit.
	Slide rails bent.	Consult Bradco Service Department.
Metallic banging when weight drops.	Rubber cushions worn or missing.	Check and replace if necessary.
	Weight contacting frame or other components.	Inspect for interference and correct.
	Unit is being dryfired.	Follow correct operating procedure.
Unit will not drive post.	Unusually difficult soil or rocks.	Relocate post or remove rock.
	Weight dropping too slowly.	Determine cause and remedy.
	Insufficient weight for soil conditions.	Add ballast. (Up to 600 lbs total weight.)
Chain wear block catches on weight during drop.	Weight dropping too slowly.	Determine cause and remedy.
	Excessive hydraulic flow.	Adjust hydraulic flow from skid steer.

BOLT TORQUE SPECIFICATIONS

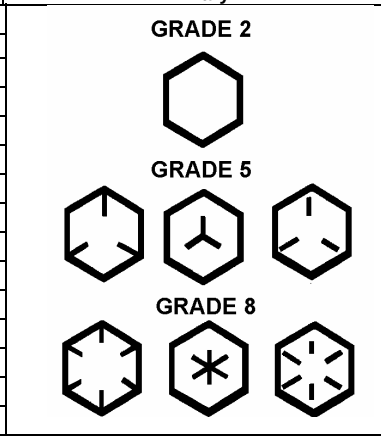
GENERAL TORQUE SPECIFICATION TABLES

Use the following charts when determining bolt torque specifications when special torques are not given. Always use grade 5 or better when replacing bolts.

SAE BOLT TORQUE SPECIFICATIONS

NOTE: The following torque values are for use with extreme pressure lubricants, plating or hard washer applications Increase torque 15% when using hardware that is unplated and either dry or lubricated with engine oil.

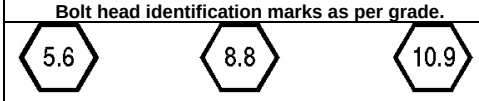
Bolt Size		SAE GRADE 5 TORQUE				SAE GRADE 8 TORQUE				Bolt head identification marks as per grade. NOTE: Manufacturing Marks Will Vary
		Pounds Feet		Newton-Meters		Pounds Feet		Newton-Meters		
Inches	Millimeters	UNC	UNF	UNC	UNF	UNC	UNF	UNC	UNF	
1/4	6.35	8	9	11	12	10	13	14	18	
5/16	7.94	14	17	19	23	20	25	27	34	
3/8	9.53	30	36	41	49	38	46	52	62	
7/16	11.11	46	54	62	73	60	71	81	96	
1/2	12.70	68	82	92	111	94	112	127	152	
9/16	14.29	94	112	127	152	136	163	184	221	
5/8	15.88	128	153	174	207	187	224	254	304	
3/4	19.05	230	275	312	373	323	395	438	536	
7/8	22.23	340	408	461	553	510	612	691	830	
1	25.40	493	592	668	803	765	918	1037	1245	
1-1/8	25.58	680	748	922	1014	1088	1224	1475	1660	
1-1/4	31.75	952	1054	1291	1429	1547	1700	2097	2305	
1-3/8	34.93	1241	1428	1683	1936	2023	2312	2743	3135	
1-1/2	38.10	1649	1870	2236	2535	2686	3026	3642	4103	



METRIC BOLT TORQUE SPECIFICATIONS

NOTE: The following torque values are for use with metric hardware that is unplated and either dry or lubricated with engine oil. Reduce torque 15% when using hardware that has extreme pressure lubricants, plating or hard washer applications.

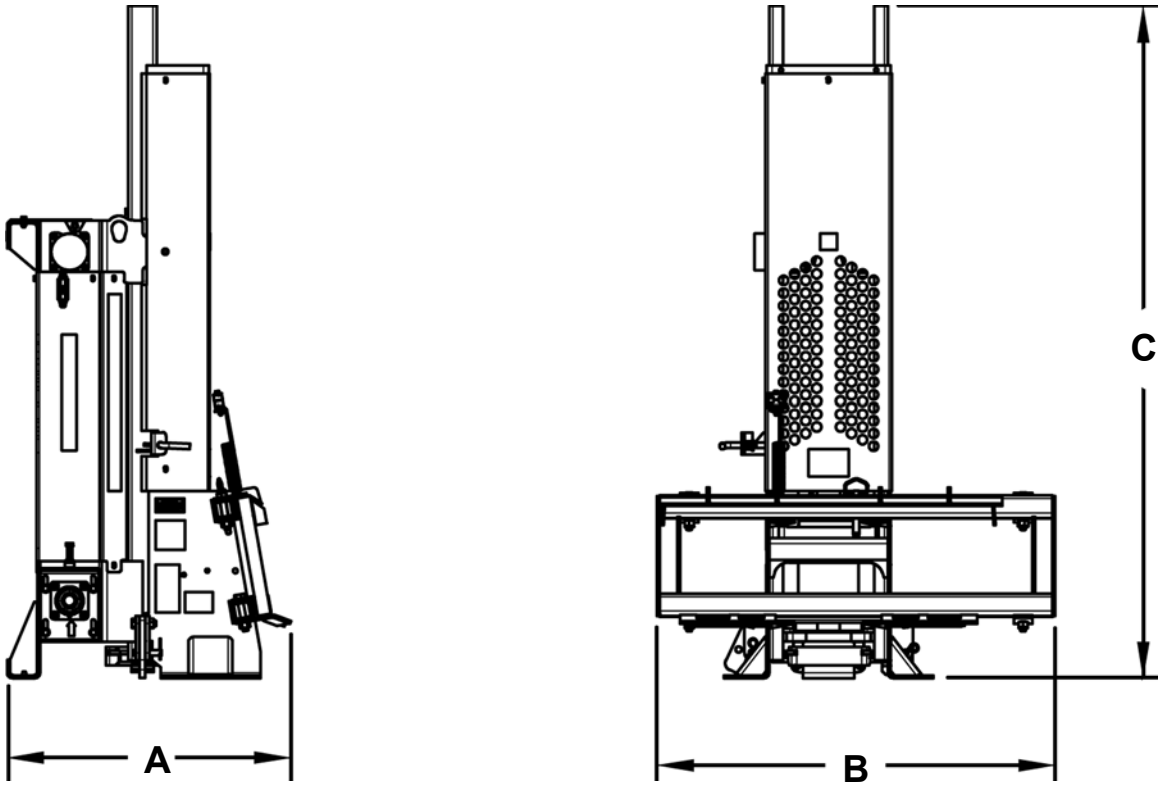
Bolt head identification marks as per grade.



Size of Bolt	Grade No.	Pitch (mm)	Pounds Feet	Newton-Meters	Pitch (mm)	Pounds Feet	Newton-Meters
M6	5.6	1.0	3.6-5.8	4.9-7.9	-	-	-
	8.8		5.8-.4	7.9-12.7		-	-
	10.9		7.2-10	9.8-13.6		-	-
M8	5.6	1.25	7.2-14	9.8-19	1.0	12-17	16.3-23
	8.8		17-22	23-29.8		19-27	25.7-36.6
	10.9		20-26	27.1-35.2		22-31	29.8-42
M10	5.6	1.5	20-25	27.1-33.9	1.25	20-29	27.1-39.3
	8.8		34-40	46.1-54.2		35-47	47.4-63.7
	10.9		38-46	51.5-62.3		40-52	54.2-70.5
M12	5.6	1.75	28-34	37.9-46.1	1.25	31-41	42-55.6
	8.8		51-59	69.1-79.9		56-68	75.9-92.1
	10.9		57-66	77.2-89.4		62-75	84-101.6
M14	5.6	2.0	49-56	66.4-75.9	1.5	52-64	70.5-86.7
	8.8		81-93	109.8-126		90-106	122-143.6
	10.9		96-109	130.1-147.7		107-124	145-168
M16	5.6	2.0	67-77	90.8-104.3	1.5	69-83	93.5-112.5
	8.8		116-130	157.2-176.2		120-138	162.6-187
	10.9		129-145	174.8-196.5		140-158	189.7-214.1
M18	5.6	2.0	88-100	119.2-136	1.5	100-117	136-158.5
	8.8		150-168	203.3-227.6		177-199	239.8-269.6
	10.9		175-194	237.1-262.9		202-231	273.7-313
M20	5.6	2.5	108-130	146.3-176.2	1.5	132-150	178.9-203.3
	8.8		186-205	252-277.8		206-242	279.1-327.9
	10.9		213-249	288.6-337.4		246-289	333.3-391.6

SPECIFICATIONS

PD4800 POST DRIVER



SPECIFICATIONS AND DESIGN ARE SUBJECT TO CHANGE WITHOUT NOTICE AND WITHOUT LIABILITY THEREFORE. WHENEVER APPLICABLE, SPECIFICATIONS ARE IN ACCORDANCE WITH SAE STANDARDS.

DESCRIPTION	SPECIFICATIONS
A. Overall Length	38.69”
B. Overall Width	54.25”
C. Overall Height	91.48”
Maximum Stroke	48.00”
Strokes per Minute	42
Weight (lbs)	1360
Hammer Weight (lbs)	289
Maximum Hammer Weight (lbs)	600
Impact Energy at 289 lb Weight	1156 ft. lbs.
Impact Energy at 600 lb Weight	2400 ft. lbs.
Hydraulic System	
Maximum Hydraulic Pressure	2000 PSI
Maximum Flow	24 GPM

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LIMITED WARRANTY

All new Bradco products are warranted to be free from defects in materials or workmanship which may cause failure under normal usage and service when used for the purpose intended.

In the event of failure within twenty four (24) months from initial retail sale, lease or rental date (excluding cable, ground engaging parts such as sprockets, digging chain, bearings, teeth, tamping and demolition heads, blade cutting edges, pilot bits, auger teeth, auger heads & broom bristles), if after examination, Bradco determines failure was due to defective material and/or workmanship, parts will be repaired or replaced. Bradco may request defective part or parts be returned prepaid to them for inspection at their place of business at Delhi, Iowa, or to a location specified by Bradco.

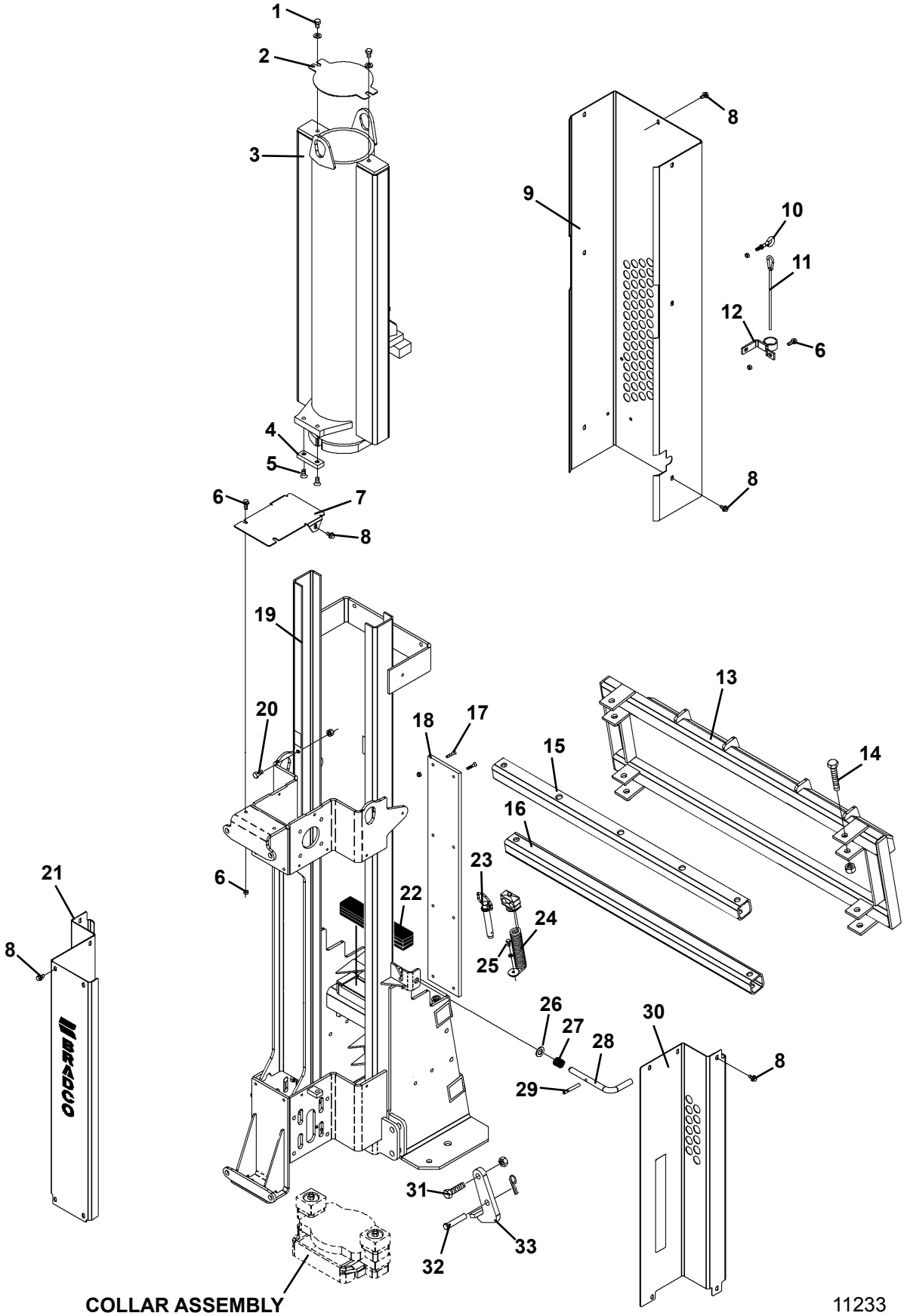
Any claims under this warranty must be made within fifteen (15) days after the Buyer learns of the facts upon which such claim is based. All claims not made in writing and received by Bradco within the time period specified above shall be deemed waived.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED AND THERE ARE NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL BRADCO BE LIABLE FOR CONSEQUENTIAL OR SPECIAL DAMAGE.

BRADCO'S LIABILITY FOR ANY AND ALL LOSSES AND DAMAGES TO BUYER, RESULTING FROM ANY CAUSE WHATSOEVER, INCLUDING BRADCO'S NEGLIGENCE, IRRESPECTIVE OF WHETHER SUCH DEFECTS ARE DISCOVERABLE OR LATENT, SHALL IN NO EVENT EXCEED THE PURCHASE PRICE OF THE PARTICULAR PRODUCTS WITH RESPECT TO WHICH LOSSES OR DAMAGES ARE CLAIMED, OR, AT THE ELECTION OF BRADCO, THE REPAIR OR REPLACEMENT OF DEFECTIVE OR DAMAGED PRODUCTS.

PD4800 POST DRIVER

ASSEMBLY #111487



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PD4800 POST DRIVER

ASSEMBLY #111487

ITEM	REQ'D	PART NO.	DESCRIPTION
1	2	1087	.50" UNC X .75" Hex Capscrew
	2	1646	.50" Hard Flat Washer
2	1	111502	Weight Cover
3	1	111489	Weight
4	1	109270	Wear Bar
5	2	11796	.50" UNC X 1.00" Flathead Screw (Install with Loctite 271 RED)
6	4	2005505	.38" UNC X 1.00" Flangehead Hex Capscrew
	4	1837	.38" UNC Deformed Lock Nut
7	1	111703	Top Chain Cover
8	21	1953	.38" UNC X .75" Flangehead Hex Capscrew
9	1	111584	Rear Cover
10	1	113342	Eyebolt (Includes Nut)
11	1	113338	Tilt Indicator
12	1	113339	Tilt Indicator Bracket
13	1	88550	Sideshift Mounting Frame
14	4	1148	.75" UNC X 4.50" Hex Capscrew
	4	1534	.75" UNC Nylock Nut
15	1	111682	Top Sideshift Tube
16	1	111684	Bottom Sideshift Tube
17	8	10164	.31" UNC X 1.50" Flathead Screw
	8	1753	.31" UNC Nylock Nut
18	1	111801	Wear Strip
19	1	111492	Post Driver Frame
20	1	1088	.50" UNC X 1.00" Hex Capscrew
	1	1505	.50" Lock Washer
	1	1228	.50" UNC Hex Nut
21	1	111585	Front Cover
22	3	111577	Rubber Cushion
23	1	1987	Hitch Pin
24	1	103179	Hose Clamp Assembly
25	1	1021	.31" UNC X .75" Hex Capscrew
	1	1502	.31" Lock Washer
26	1	1649	.75" Hard Flat Washer
27	1	2003875	Compression Spring
28	1	111731	Weight Lock Handle
29	1	10197	Roll Pin
30	1	113218	Side Cover
31	2	1142	.75" UNC X 2.75" Hex Capscrew
	2	1936	.75" UNC Deformed Lock Nut
32	2	88293	Clevis Pin
	2	1735	Cotter Hairpin
33	2	112358	Collar Stop

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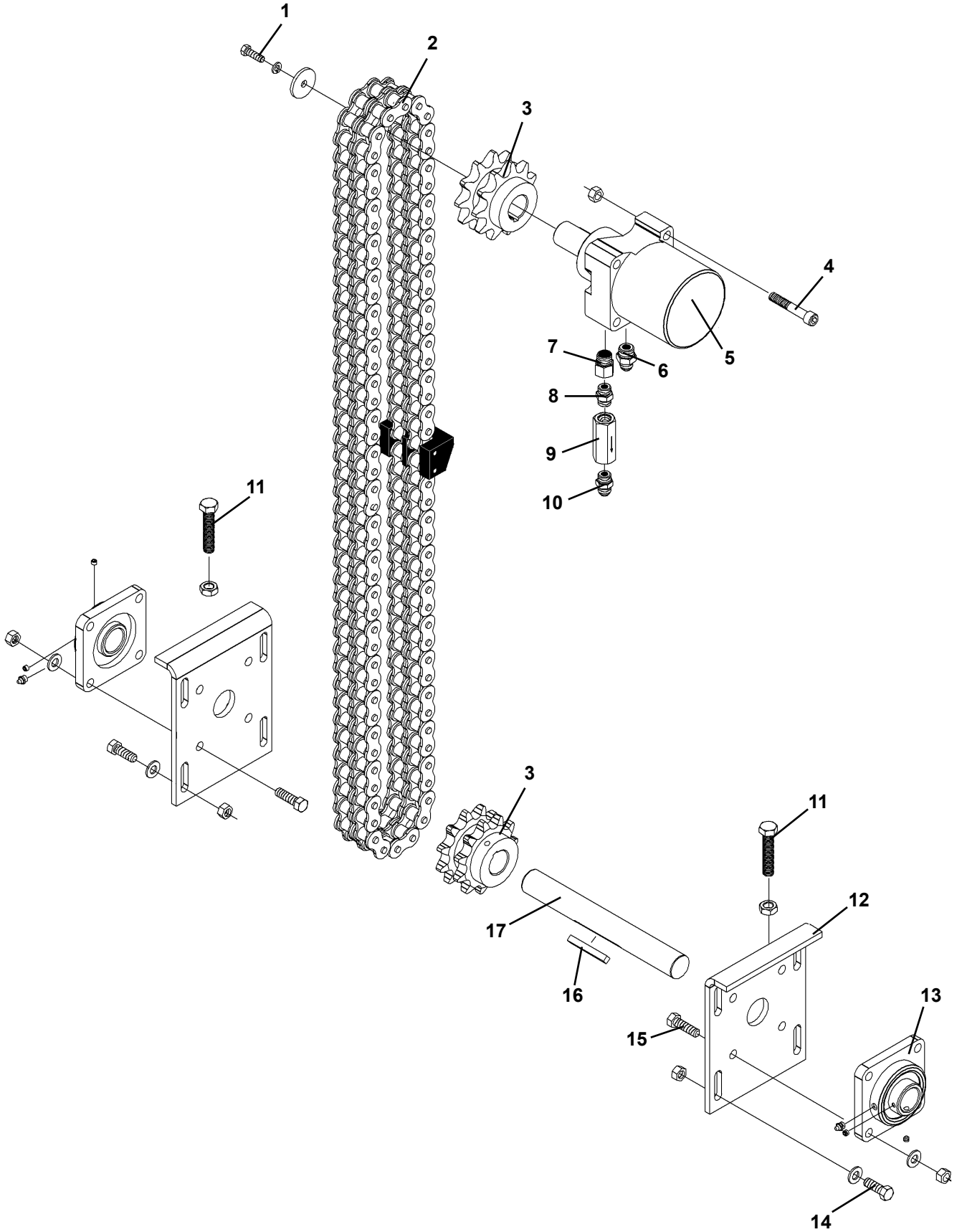
PD4800 POST DRIVER

ASSEMBLY #111487



11235 7-9-08

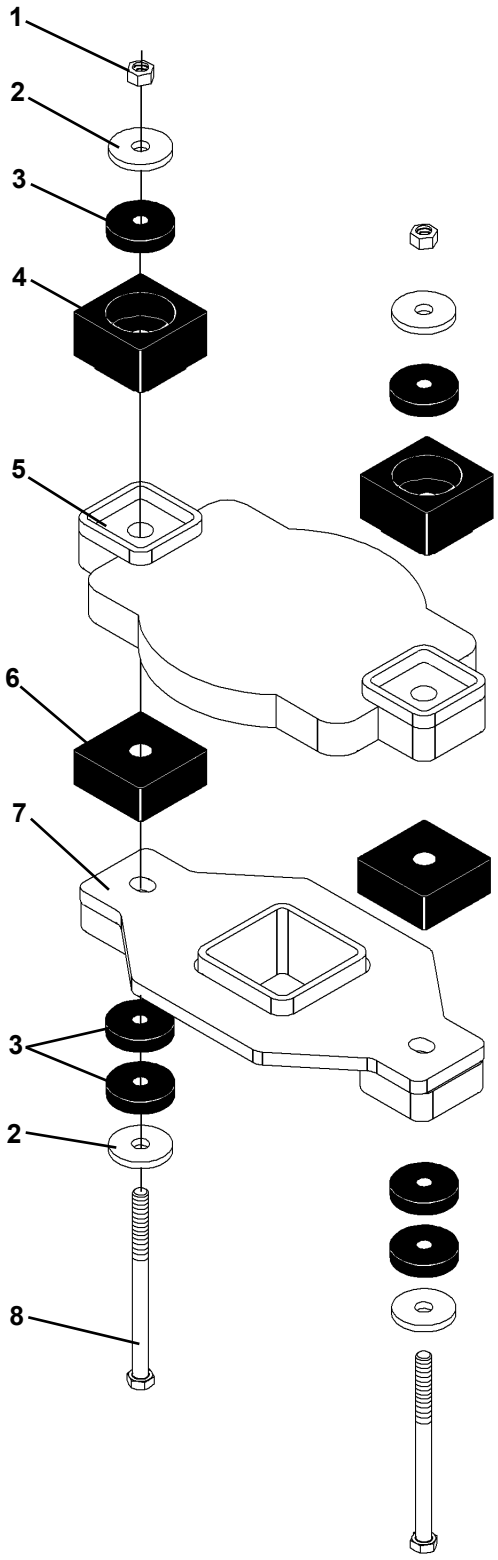
PD4800 POST DRIVER

ASSEMBLY #111487

ITEM	REQ'D	PART NO.	DESCRIPTION
1	1	1044	.38"UNC X 1.25" Hex Capscrew
	1	1503	.38" Lock Washer
	1	113113	Washer
2	1	112082	Chain Assembly
	1	111126	Master Link
	-	113410	Replacement Pick Up Block Assembly (Includes Pins)
3	2	108265	Sprocket 11T
	-	1575	Replacement Set Screw
4	4	10187	.50" UNC X 3.00" Sockethead Capscrew
	4	1841	.50" UNC Deformed Lock Nut
5	1	112080	Hydraulic Motor
		32903	Replacement Key
6	1	3270	Straight Connector 10MBo-8MJ
7	1	30298	Straight Connector 10MBo-8FBo
8	1	30289	Straight Connector 8MBo-8MBo
9	1	107636	Check Valve
10	1	3103	Straight Connector 8MBo-8MJ
11	2	10208	.62" UNC X 3.00" Hex Capscrew (Chain Adjustment Bolt)
	2	1244	.62" UNC Jam Nut
12	2	111587	Bearing Mounting Plate
13	2	2000085	Bearing Assembly (Complete with Housing)
		113411	Replacement Bearing with Locking Collar
		1730	Replacement Set Screw (Locking Collar)
		9371	Replacement Grease Fitting
14	8	1090	.50" UNC X 1.50" Hex Capscrew
	8	1646	.50" Hard Flat Washer
	8	1841	.50" UNC Deformed Lock Nut
15	8	1091	.50" UNC X 1.75" Hex Capscrew
	8	1646	.50" Hard Flat Washer
	8	1841	.50" UNC Deformed Lock Nut
16	1	53742	Key
17	1	111591	Pin

OPTIONAL 3.50” SQUARE COLLAR ASSEMBLY

ASSEMBLY #112493



11252 7-23-08

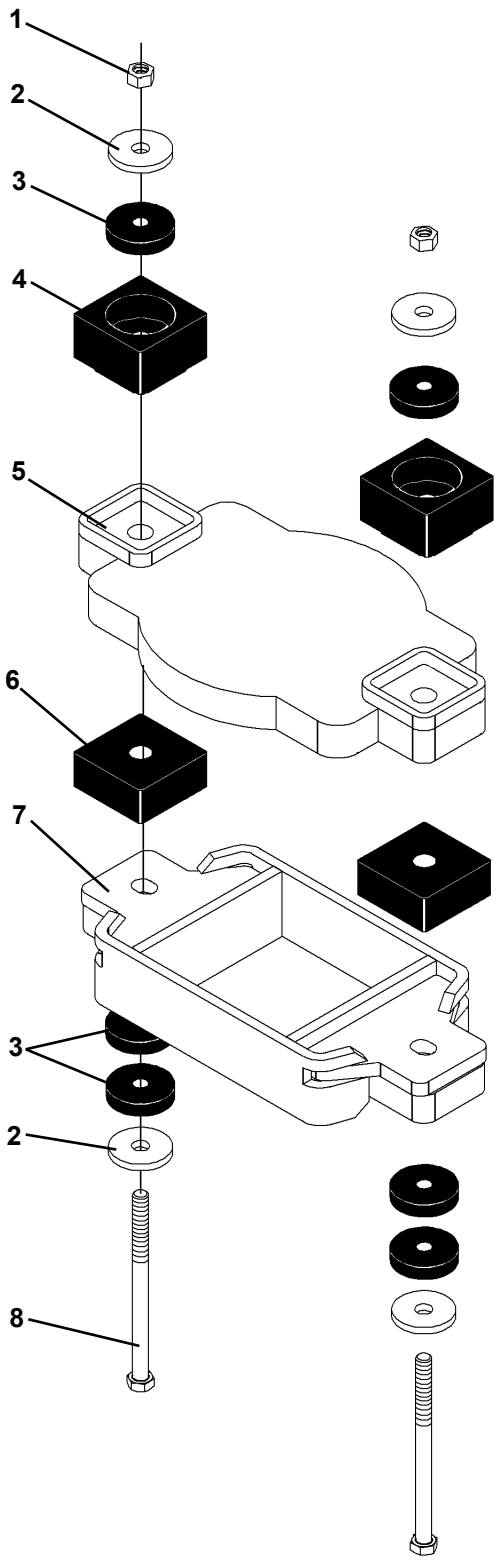
OPTIONAL 3.50” SQUARE COLLAR ASSEMBLY

ASSEMBLY #112493

ITEM	REQ’D	PART NO.	DESCRIPTION
1	2	1812	.50” UNC Nylock Nut - Grade 8
2	4	100387	Washer
3	6	87553	Rubber Retainer
4	2	87588	Guide Block
5	1	112438	Striker Plate
6	2	88811	Middle Guide Block
7	1	88812	3” & 4” Post Head Collar
8	2	10002	.50” UNC X 7.00” Hex Capscrew - Grade 8

OPTIONAL 6” SQUARE COLLAR ASSEMBLY

ASSEMBLY #112492



11254 7-23-08

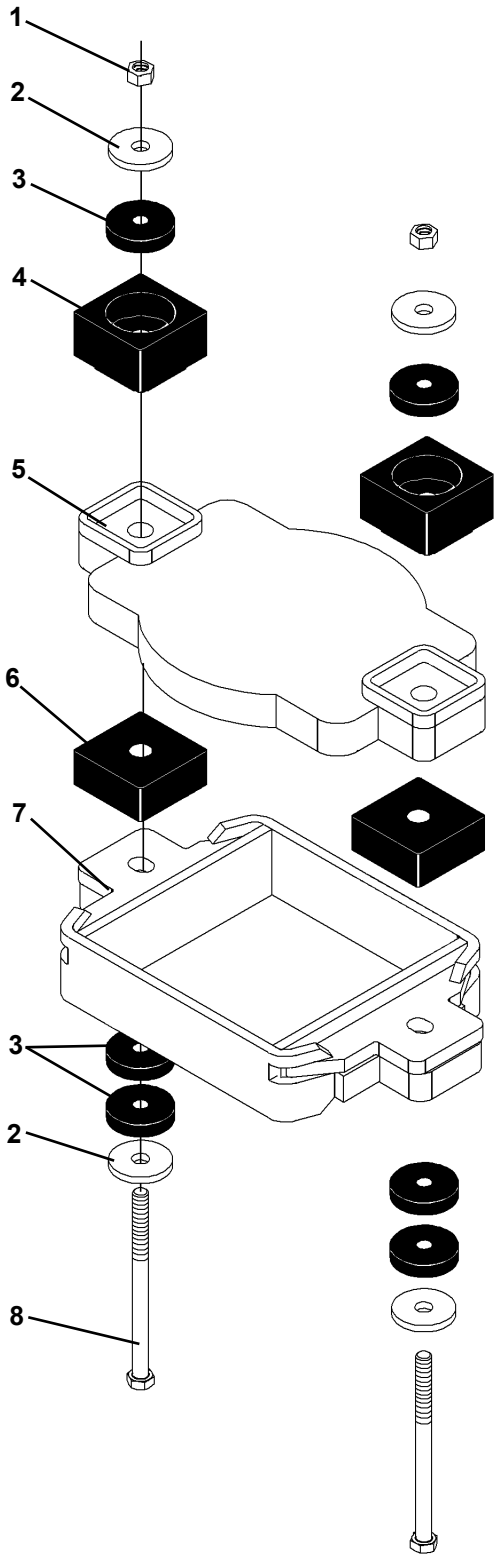
OPTIONAL 6” SQUARE COLLAR ASSEMBLY

ASSEMBLY #112492

ITEM	REQ’D	PART NO.	DESCRIPTION
1	2	1812	.50” UNC Nylock Nut - Grade 8
2	4	100387	Washer
3	6	87553	Rubber Retainer
4	2	87588	Guide Block
5	1	112438	Striker Plate
6	2	88811	Middle Guide Block
7	1	89413	6” Post Head Collar
8	2	10002	.50” UNC X 7.00” Hex Capscrew - Grade 8

OPTIONAL 8” SQUARE COLLAR ASSEMBLY

ASSEMBLY #112491



11256 7-23-08

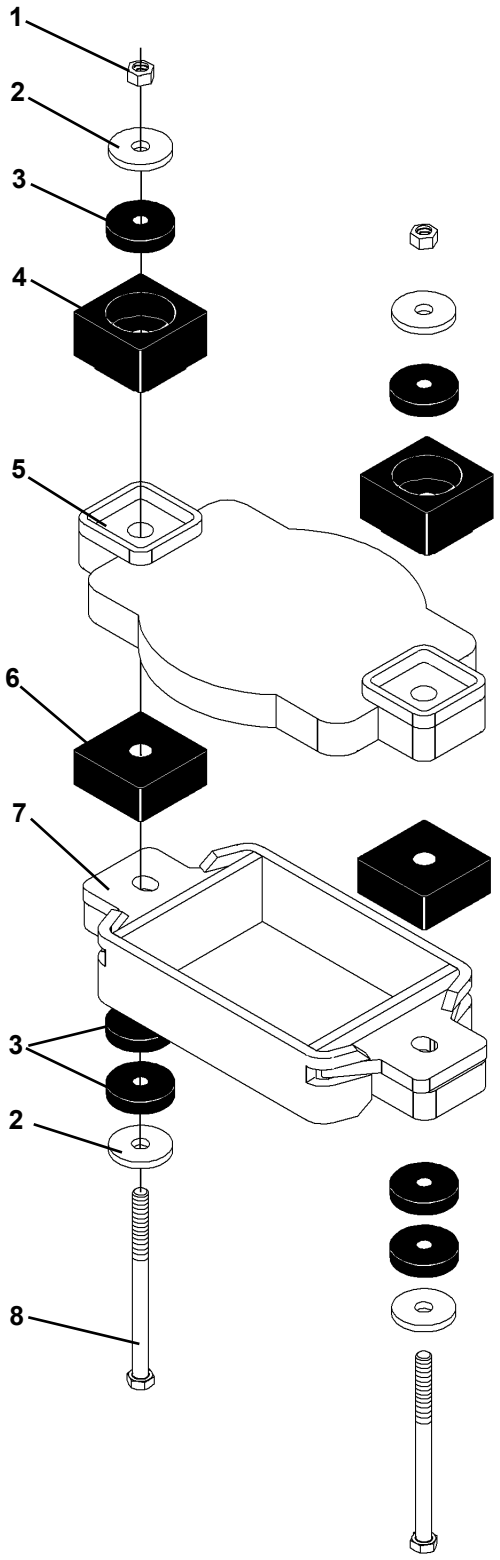
OPTIONAL 8” SQUARE COLLAR ASSEMBLY

ASSEMBLY #112491

ITEM	REQ’D	PART NO.	DESCRIPTION
1	2	1812	.50” UNC Nylock Nut - Grade 8
2	4	100387	Washer
3	6	87553	Rubber Retainer
4	2	87588	Guide Block
5	1	112438	Striker Plate
6	2	88811	Middle Guide Block
7	1	32712	8” Post Head Collar
8	2	10002	.50” UNC X 7.00” Hex Capscrew - Grade 8

OPTIONAL 6” X 8” RECTANGULAR COLLAR ASSEMBLY

ASSEMBLY #112494



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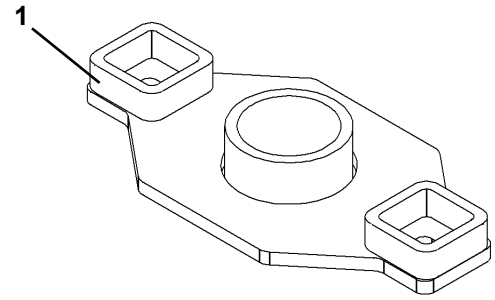
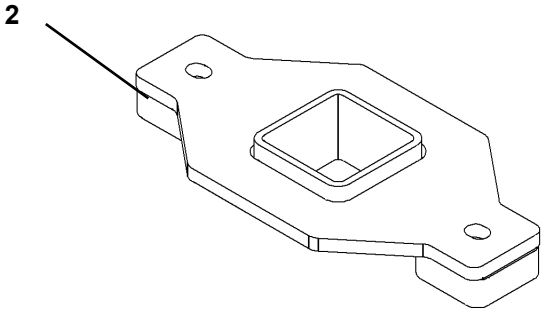
OPTIONAL 6” X 8” RECTANGULAR COLLAR ASSEMBLY

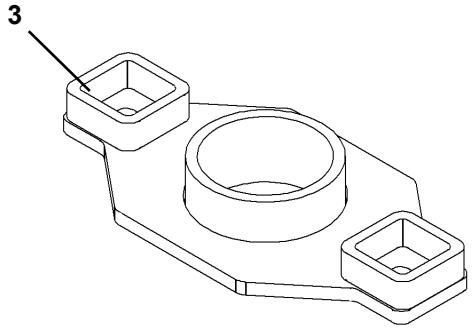
ASSEMBLY #112494

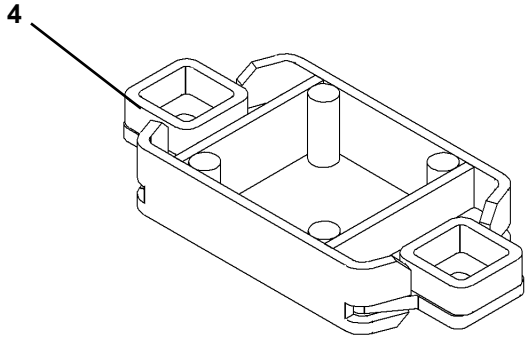
ITEM	REQ’D	PART NO.	DESCRIPTION
1	2	1812	.50” UNC Nylock Nut - Grade 8
2	4	100387	Washer
3	6	87553	Rubber Retainer
4	2	87588	Guide Block
5	1	112438	Striker Plate
6	2	88811	Middle Guide Block
7	1	89147	6” X 8” Post Head Collar
8	2	10002	.50” UNC X 7.00” Hex Capscrew - Grade 8

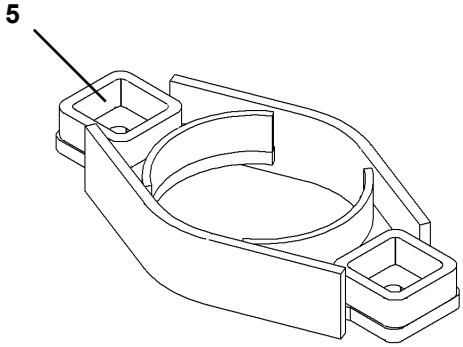
OPTIONAL COLLARS

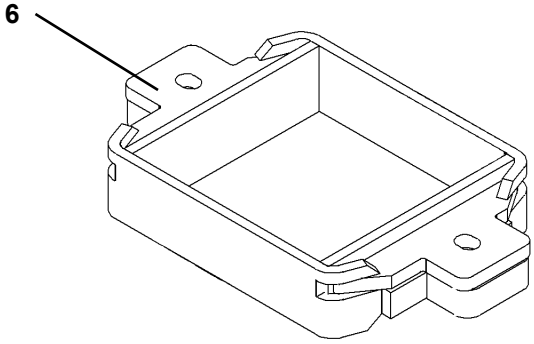


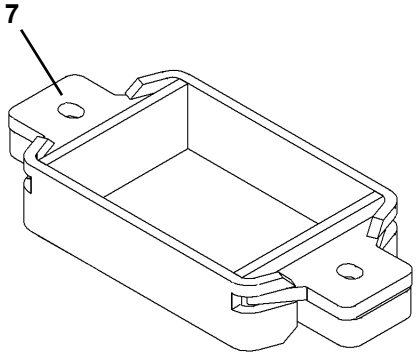


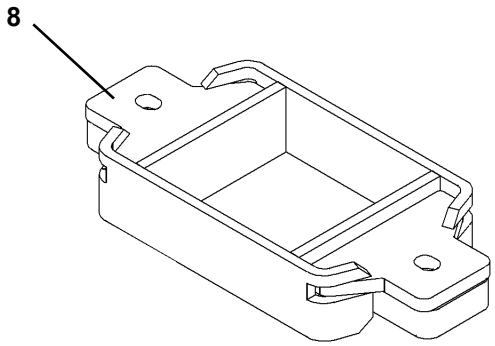










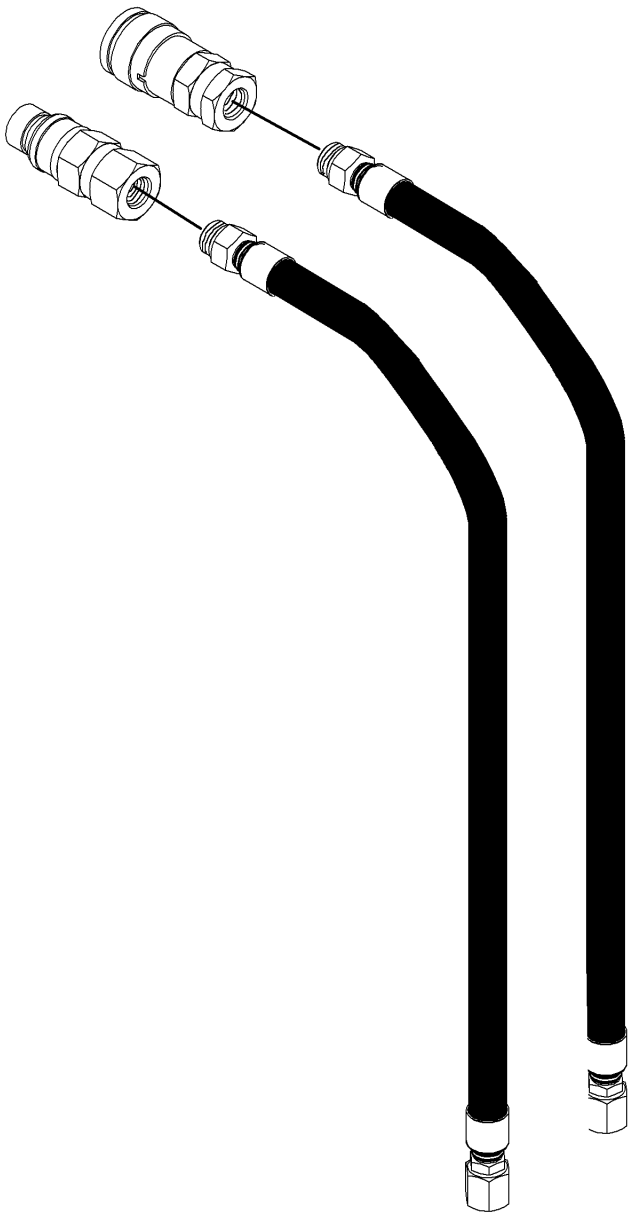


11260 7-23-08

OPTIONAL COLLARS

ITEM	REQ'D	PART NO.	DESCRIPTION
1	-	19964	3.50" Round Post Head Collar
2	-	88812	3.50" Square Post Head Collar
3	-	19965	4" Round Post Head Collar
4	-	88815	4" X 6" "H" Beam Post Head Collar
5	-	88813	6" Round Post Head Collar
6	-	32712	8" Round or Square Post Head Collar (Install with long edge towards the front of the unit.)
7	-	89147	6" X 8" Rectangular Post Head Collar
8	-	89413	6" Square Post Head Collar

HOSE KITS



11262 7-22-08

HOSE KITS

HOSE KIT #112919

(Recommended when attaching PD4800 Post Driver to a Heavy Duty Tilt Attach)

ITEM	REQ'D	PART NO.	DESCRIPTION
1	1	19628	Male Coupler 8FBo .50" Body
2	1	14175	Female Coupler 8FBo .50" Body
3	2	35379	Hose .50" X 80" 8MBo-8FJX

HOSE KIT #112920

ITEM	REQ'D	PART NO.	DESCRIPTION
1	1	19628	Male Coupler 8FBo .50" Body
2	1	14175	Female Coupler 8FBo .50" Body
3	2	38610	Hose .50" X 108" 8MBo-8FJX

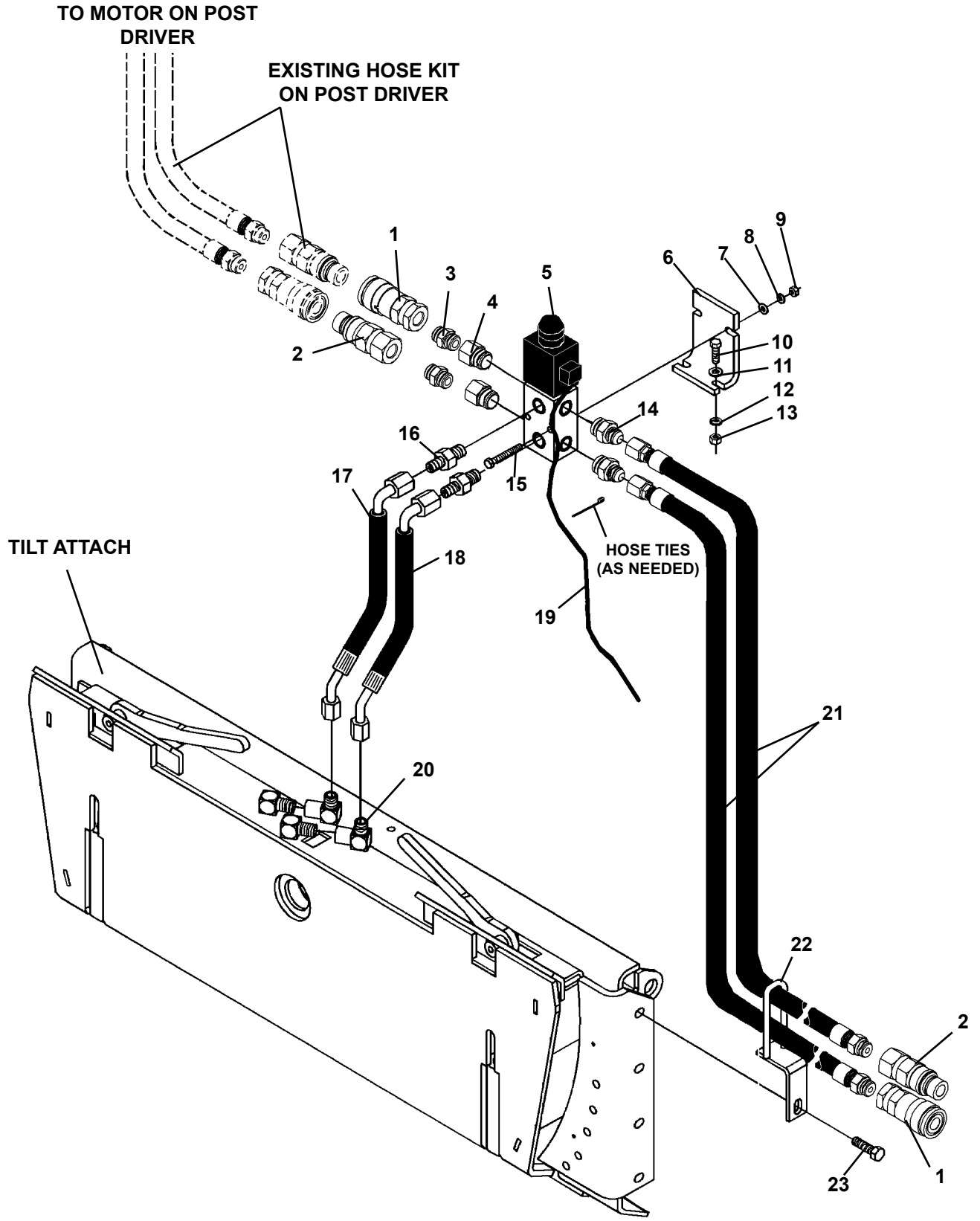
HOSE KIT #113351

ITEM	REQ'D	PART NO.	DESCRIPTION
1	1	19628	Male Coupler 8FBo .50" Body
2	1	14175	Female Coupler 8FBo .50" Body
3	2	38617	Hose .50" X 136" 8MBo-8FJX

VALVE KIT

ASSEMBLY #112921

(FOR MOUNTING THE PD4800 POST DRIVER TO A BRADCO TILT ATTACH)



11264 7-24-08

VALVE KIT

ASSEMBLY #112921

(FOR MOUNTING THE PD4800 POST DRIVER TO A BRADCO TILT ATTACH)

ITEM	REQ'D	PART NO.	DESCRIPTION
1	2	14175	Female Coupler 8FBo .50" Body
2	2	19628	Male Coupler 8FBo .50" Body
3	2	30289	Straight Connector 8MBo-8MBo
4	2	30298	Straight Connector 10MBo-8FBo
5	1	2243	Diverter Valve
6	1	87655	6-Way Valve Mounting Plate
7	2	1513	.31" Flat Washer
8	2	1502	.31" Lock Washer
9	2	1225	.31" UNC Hex Nut
10	2	1044	.38" UNC X 1.25" Hex Capscrew
11	2	1514	.38" Flat Washer
12	2	1503	.38" Lock Washer
13	2	1226	.38" UNC Hex Nut
14	2	3270	Straight Connector 10MBo-8MJ
15	2	1032	.31" UNC X 3.50" Hex Capscrew
16	2	62208	Straight Connector 6MJ-10MBo With .060 Dia. Orifice
17	1	37734	Hose .25" X 16.50" 6FJX 45° - 6FJX 90°
18	1	37735	Hose .25" X 21" 6FJX 45° - 6FJX 90°
19	2	88626	Wire Assembly
20	2	3430	90° Adapter 6FJX-6MJ
21	2	35379	Hose Assembly .50" X 80" 8MBo-8FJX
22	1	87652	Hose Loop
23	1	1089	.31" UNC X 3.50" Hex Capscrew