

Log Grapple

Operation and Maintenance Manual



106715, 106720, 106815, & 106820

Register your
WARRANTY
within 30 days
of purchase



888-376-7027 | BlueDiamondAttachments.com



BD-092

Introduction: Owner Information

Thank you for your decision to purchase a Blue Diamond® Log Grapple. 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 right side of the mounting plate as shown above.

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

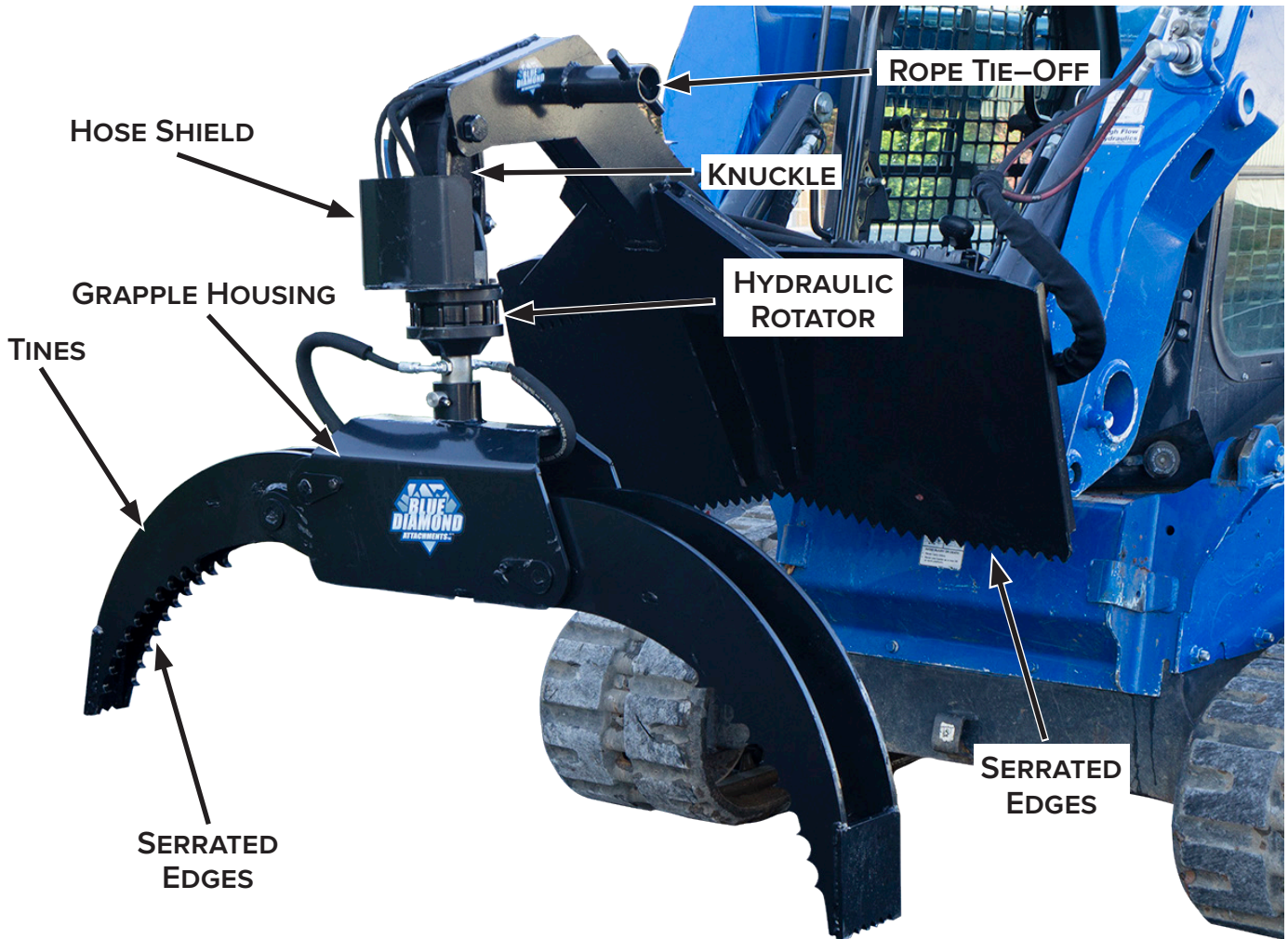
NOTE: The directions left, right, front, and rear, as mentioned throughout this manual, are as viewed from the operator's position.

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1. Introduction

1.1 Attachment Identification



1.2 About this Attachment

The Blue Diamond® Log Grapple is a high quality attachment for tree work. Whether you are working in the log yard or clearing land, this tool can handle the load. The serrated brace helps stabilize logs when moving. The impressive clamping force holds onto large logs tightly.

Two models are offered: manual rotation and hydraulic rotation.

Available for most mini skid steers.

1.3 Attachment Model Numbers

MODEL NUMBER	SKID STEER SIZE	ROTATION
106715	Mini	Manual
106720	Mini	Hydraulic
106815	Full	Manual
106820	Full	Hydraulic

Contact Blue Diamond® or your local dealer for other mount options.

REVISION	SERIAL NUMBER
000	<190000
001	>190000

2. Safety

2.1 General Safety Information



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.



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



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.



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.



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 Operator's 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 condition. In case of damaged or missing shields, replace them immediately.
- It is absolutely forbidden to remove or alter safety devices and/or safety precautions
- Pay maximum attention to avoid any accidental contact with rotating parts of the machine.
- If the use of the machine is required at night or in conditions of reduced visibility, use the lighting system of the prime mover and an auxiliary lighting system if required.

2. Safety



2.2 Operators

Qualified Operators

The operator is a person suited to the work and who is physically and psychologically able to withstand the demands connected with operating the equipment for its intended use. The operator must not allow anyone to approach the machine while it is working and must not allow external personnel to operate the machine or attachment.

The operator is to follow the given instructions in this manual and the machine operator's manual in order to obtain maximum performance, minimal fuel consumption, and maximum safety for themselves and for others.

The operator is responsible for scrupulously observing all the instructions given in this manual.

 **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 Safety

- 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

- 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.
- This equipment is dangerous to persons unfamiliar with its operation.
- 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 the 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.
- DO NOT permit personnel to be in the work area when operating the equipment.
- 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.
- DO NOT operate equipment in poor visibility conditions such as fog, darkness, or any conditions that limit clear visibility less than 300 feet (100 m) in front of and to the sides of the equipment.
- When conditions make it necessary to slow ground speed, shift to a lower gear rather than reducing engine speed. The engine will maintain rated speed and keep cutter running at optimum cutting speed.
- DO NOT operate in a work area that has not been inspected for foreign debris and obstacles.
- Remove any foreign objects and clearly mark any objects that cannot be removed.
- Wear safety glasses, gloves, hearing protection, and other protective clothing when required.

Machine Requirements and Capabilities

- Keep bystanders clear of moving parts and the work area. Keep children away.
- Use caution on slopes and near banks and ditches to prevent overturn.
- DO NOT exceed 2000 lbs for the mini models and 2500 lbs for the full size models. Damage to the attachment, prime mover, and / or operator could occur if ignored.
- The prime mover must have adequate horsepower and weight to provide satisfactory results.
- The prime mover must be equipped with an auxiliary circuit that is available on the loader arms and is controlled by a switch, pedal, or handle inside the machine's cab.
- The hydraulic rotating Log Grapple requires an additional wire harness to operate the rotating function.

2. Safety

2.3 Safety Guidelines Cont'd

Fire Prevention Safety

- The equipment's hydraulic motor compartment must be inspected every day and cleaned if necessary to prevent fire hazards and overheating.
- All fuels, most lubricants, and some coolant mixtures are flammable. Flammable fluids that are leaking or spilled onto hot surfaces or onto electrical components can cause a fire.

Transporting Safety

- Comply with state and local laws governing highway safety and movement of machinery on public roads.
- Check local laws for all highway lighting and marking requirements.
- Always yield to oncoming traffic, and move to the side of the road so any following traffic may pass.
- Never allow riders on either machine or equipment.
- If transporting the equipment on a truck or trailer, make sure the equipment is properly secured to the transport vehicle.

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.

Personal Protective Equipment



Proper Work Clothes: To help ensure your safety as a designated operator wear proper work clothes including tight fitting clothes, protective gloves and shoes.



Hand Protection: To help ensure your safety as a designated operator wear protective gloves.



Protective Shoes: To help ensure your safety as a designated operator wear protective shoes.



Safety Helmet: To help ensure your safety as a designated operator wear a safety helmet.



Safety Helmet and Eye/Ear Protection: To help ensure your safety as a designated operator wear a safety helmet and eye/ear protection.

3. Operation

3.1 Entering and Exiting the Prime Mover



See the machine's Operator's Manual for detailed information on operating the loader.

Entering The Operator's Position

Use the attachment safety treads, handles and steps (on the machine) to enter the operator's position.

When in the operator's position, fasten the seatbelt, lower safety seat bar, start the engine, and release the parking brake.

Leaving The Operator's Position



AVOID SERIOUS INJURY OR DEATH

- Always park on a flat, level surface.
- Lower lift arms and place attachment flat on the ground.
- Place all controls in NEUTRAL.
- Engage the park brake.
- Stop the engine, and remove the key.
- Wait for all moving parts to stop.

SEE MACHINE'S OPERATOR'S MANUAL FOR ADDITIONAL INFORMATION.

Park the machine / attachment on a flat, level surface.

Place all controls in neutral, engage the parking brake, stop the engine, and wait for all moving parts to stop. Leave the operator's position.

3.2 Attachment Installation

Connecting Attachment To The Machine



CRUSH HAZARD

- Before moving the machine, look in all directions and make sure no bystanders, especially small children are in the work area. Do not allow anyone between the machine and attachment when approaching the attachment for connecting.
- Keep fingers and hands out of pinch points when connecting and disconnecting the attachment.

Before connecting to the attachment, inspect the machine's mounting plate. (See the machine's Operator's Manual for inspecting the mounting frame).

Enter the operator's position. See "Entering the Operator's Position" on page 9.

Drive the machine slowly forward, until the top edge of the machine's mounting plate is under the top flange of the attachment mounting frame.

Slowly tilt the machine's mounting plate back until the attachment mounting frame fully contacts the front of the machine's mounting plate.

Leave the operator's position. See "Leaving the Operator's Position" on page 9.

3. Operation

3.2 Attachment Installation Cont'd

Connecting Attachment to the Machine Cont'd

Slowly tilt the machine's mounting plate back until the attachment mounting frame fully contacts the front of the machine's mounting plate.

Leave the Operator's position. See "Leaving the Operator's Position" on page 9.



WARNING



AVOID SERIOUS INJURY OR DEATH

The locking pins / wedges must extend through the holes in the attachment mounting frame. Failure to secure locking pins / wedges can allow attachment to come off.

**SEE MACHINE'S OPERATOR'S MANUAL FOR
ADDITIONAL INFORMATION.**

Engage attachment locking levers / wedges (See the machine's Operator's Manual for detailed information).

Connecting Hydraulic Hoses



IMPORTANT



Thoroughly clean the quick couplers before making connections. Dirt can quickly damage the hydraulic system.

Remove dirt or debris from the male and female couplers. Visually inspect the couplers for corroding, cracking, damage, or excessive wear. Replace as needed.

Connect the attachment hydraulic hoses to the machine. Pull on each hose to verify full connection is made.

Disconnecting Hydraulic Hoses



WARNING



AVOID SERIOUS INJURY OR DEATH

Hydraulic fluid, tubes, fittings, and quick couplers can get hot during operation. Be careful when connecting and disconnecting hydraulic hoses.

Relieve auxiliary hydraulic pressure. (See the machine's Operator's Manual for correct procedure.)

Disconnect attachment hydraulic hoses from the machine.

Disconnecting Attachment From the Machine

Relieve auxiliary hydraulic pressure. (See the machine's Operator's Manual for correct procedure.)

Park the machine and attachment on a flat level surface. Lower the attachment flat on the ground.

Leave the operator's position. See "Leaving the Operator's Position" on page 9.

Disconnect attachment hydraulic hoses from the machine.

Disengage locking pins / wedges. (See the machine's Operator's Manual for correct procedure.)

Enter the operator's position. See "Entering the Operator's Position" on page 9.

Slowly tilt the machine's mounting plate forward until the attachment mounting frame is free from the machine's mounting plate.

Drive the machine slowly backward, away from the attachment.


3. Operation


3.3 Pre-Operation

Equipment Inspection

It is recommended to inspect the equipment for damage and wear before use. Use the following list as a guideline during equipment inspection:

- Check all hardware connections to the prime mover for damage or fatigue, such as cracks or other structural flaws.
- Check that all latches or locks are closed.
- Check that all hydraulic fittings are tight and free of leaks.
- Check that all hydraulic lines are free of leaks, holes, or cracks.

 **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.

- Check that the prime mover is in good working condition.
- Check for loose bolts and other hardware, and tighten them if necessary.
- Check that all safety decals are in place and can be read. Replace them if necessary.

NOTE: Replace any damaged hardware, hoses, and fittings before using the equipment.

Usage Guidelines

Before each use, perform the following:

- Perform an inspection before each use.
- Inspect the attachment by performing a walk around.
- Use the Log Grapple for materials handling only.
- Inspect the Log Grapple after severe use or damage.

 **DANGER** 

AVOID SERIOUS INJURY OR DEATH

Keep all body parts away from the Log Grapple when in use. The tines may open or close unexpectedly, causing serious injury or death.

Grapple Attachment Controls

The Log Grapple is designed to run off the skid steer loader auxiliary hydraulic system.

Height and tilt functions of the attachment are operated with the control handles or pedals in the cab. Consult the machine's Operator's Manual for precise instructions regarding these functions.

The hydraulic rotating Log Grapple requires an additional wire harness to operate the rotating function. Contact Blue Diamond® Product Support or your local dealer for additional information.

3. Operation

3.4 Initial Setup



WARNING



AVOID SERIOUS INJURY OR DEATH

Moving the attachment with bystanders in the area could result in serious injury or death. Before moving the attachment / machine, always make sure the area is clear of bystanders.



IMPORTANT



Check the skid steer's hydraulic oil level and add oil, if necessary, before and after doing steps 1 and 2.

Enter the operator's position (see "Entering the Operator's Position" page 9).

Lift the attachment 10" (254 mm) off the ground.

With the skid steer engine RPMs just above idle, slowly engage the auxiliary hydraulic flow to the tines until the tines are fully opened. Reverse the direction of the flow until the tines are fully closed. Repeat this two or more times to purge any air from the system.

Lower the attachment to the ground and shut off the skid steer's engine. Exit the operator's position (see "Leaving the Operator's Position" page 9).

Check the skid steer's hydraulic oil level, and add oil if necessary.

Inspect the attachment's hydraulic plumbing for any noticeable leaks. Correct these leaks before continuing.

3.5 Operating the Attachment



WARNING



CRUSH HAZARD

Never allow any person in between the tines when the attachment is in operation or not in operation.



CAUTION



AVOID INJURY

Practice caution when operating on uneven ground. A machine rollover could result in injury. Always wear your seatbelt when operating this type of machinery.

The clamp is free swinging.

1. Using the auxiliary hydraulic flow, open the tines.
2. With the clamp open, move the log grapple to where one tine hooks underneath the log-like material.
3. Reverse the auxiliary hydraulic flow to close the tines.

NOTE: Make sure the load being carried is balanced to minimize swinging.

The hydraulic rotating Log Grapple requires a wire harness to rotate the grapple assembly. Engage the auxiliary electric signal with the control box switch or the machine's joystick buttons. Press and HOLD the button while engaging the hydraulics to rotate in either direction.

Contact Blue Diamond® Product Support if needing further assistance.

3. Operation

3.6 After 1–5 Hours of

Operation

- Check all hardware. Tighten to their specified torque if necessary.
- Check hydraulic system for leaks. Tighten or replace if necessary.
- Check the prime mover's hydraulic oil reservoir level. Fill if necessary.
- Check for entangled material. Remove before resuming work.
- Lubricate all pivot joints with grease.

3.7 Grapple Attachment Tips

- Always inspect the work area before using the attachment. Locate and mark any utilities, steel posts, rocks, or any other objects that could be damaged or would damage the attachment during operation.
- Operate at a safe, slow pace that will allow you to observe the area surrounding the attachment and prime mover.
- Avoid overloading the Log Grapple.
- The serrated edge on the bottom of the mount allows the operator to pick up logs from the end.
- If the logs are too long to lift from the end, drag or center the load being carried by the attachment. Estimate the load's center, and pick it up accordingly.
- Beware of swing radius of the material being carried.
- Do not use the attachment to push or pull trees or any other type of construction.
- To save some service work and down time, always pay attention so that tree branches or roots do not damage the hydraulic system or enter the cab area.
- Remove limbs from tree trunks for easier and safer handling.

4. Maintenance

4.1 Service Schedule

DESCRIPTION	SERVICE PROCEDURES					
	Check	Clean	Lube	Change	Adjust	Drain
Daily Maintenance (or every 8 hours)						
Hydraulic Fittings	•					
Hydraulic Hoses	•					
All Hardware	•					
Safety Decals	•					
Grease Points			•			
Weekly Maintenance (or every 40 hours)						
Frame (cracks, bends, or damage)	•					
Seasonal Maintenance						
All Hardware	•				•	
Repaint	•			•		
Safety Decals	•			•		

4. Maintenance

Before carrying out any maintenance operations, the operator must carefully read and understand the instructions contained in this manual.

Regular and thorough maintenance keeps the machine in optimal condition and prolongs its service life.



WARNING



AVOID SERIOUS INJURY OR DEATH

- Always park on a flat, level surface.
- Lower lift arms and place attachment flat on the ground.
- Place all controls in NEUTRAL.
- Engage the park brake.
- Stop the engine, and remove the key.
- Wait for all moving parts to stop.

**SEE MACHINE'S OPERATOR'S MANUAL FOR
ADDITIONAL INFORMATION.**

4.2 Before Every Use

Check that all fasteners (nuts, bolts, pins, keepers, etc.) are in their right place and are tight.

Inspect and replace any worn, torn, or missing safety decals.

Investigate the location of any oil leaks. Repair if needed.

Lubricate all grease points as shown in Figure 1 on page 16.

4.3 Every Week

Check the condition of the frame. Repair if necessary.

4.4 After Every Season

Inspect the attachment for any loose or worn parts that may need to be replaced prior to the next season.

Clean and repaint any area that looks worn or scratched to prevent further rusting. Use an equipment paint found at a local hardware store.

Replace any warning decals that have been lost or damaged.

Store the attachment in a shed or cover with a waterproof tarp to protect it from the weather.

Do not store in an area frequented by children.

4. Maintenance

4.5 Lubrication

There are five (5) grease points on the log grapples. See Figure 1 for each location. The attachment does not need disassembled for greasing. However, the tines may need opened or closed to allow for the grease gun to reach the zerk. Ensure that the machine is turned off during service and that the lift arms with lockout braces are supported if the arms are lifted. Grease every 8 hours of use.

Lubrication Points:

1. Swinging pin
2. Left side of the cylinder inside the grapple assembly enclosure
3. Right side of the cylinder inside the grapple assembly enclosure
4. Top of left tine
5. Top of right tine

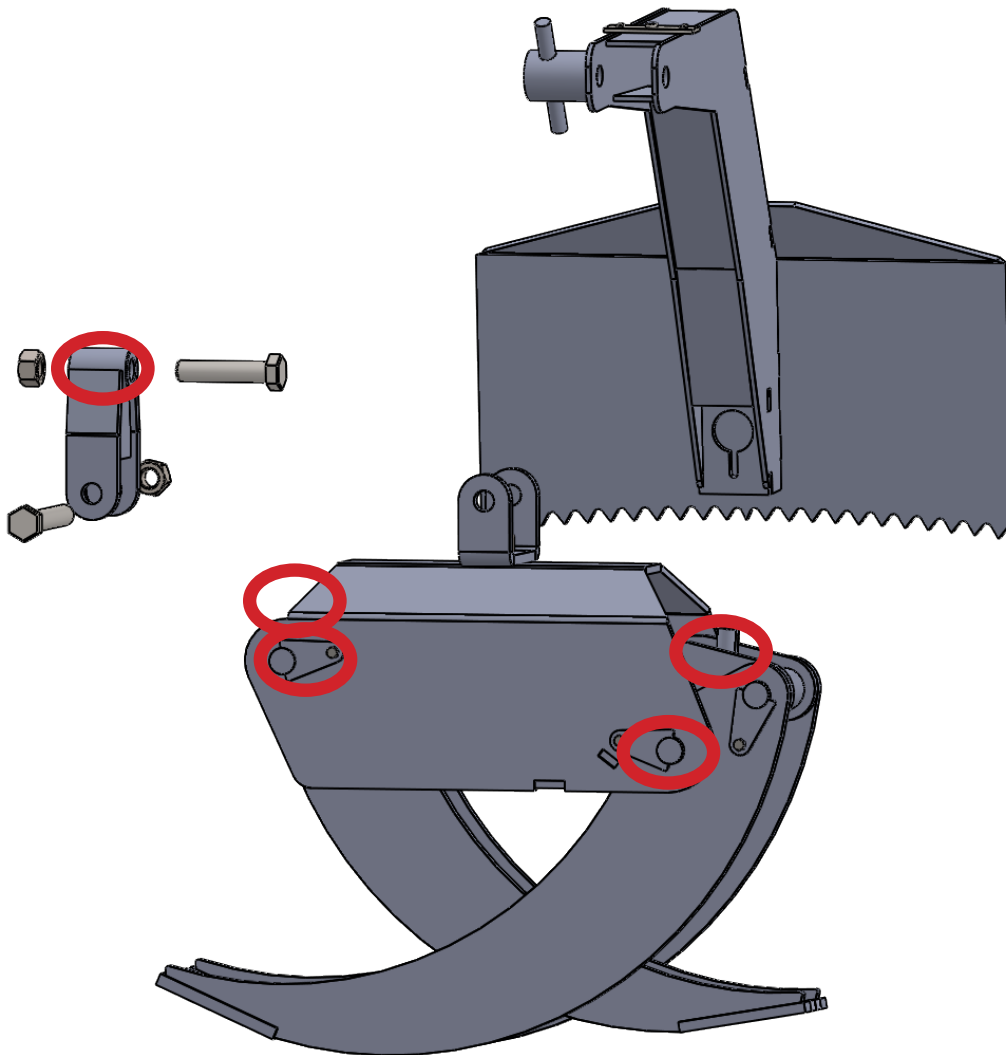


Figure 1

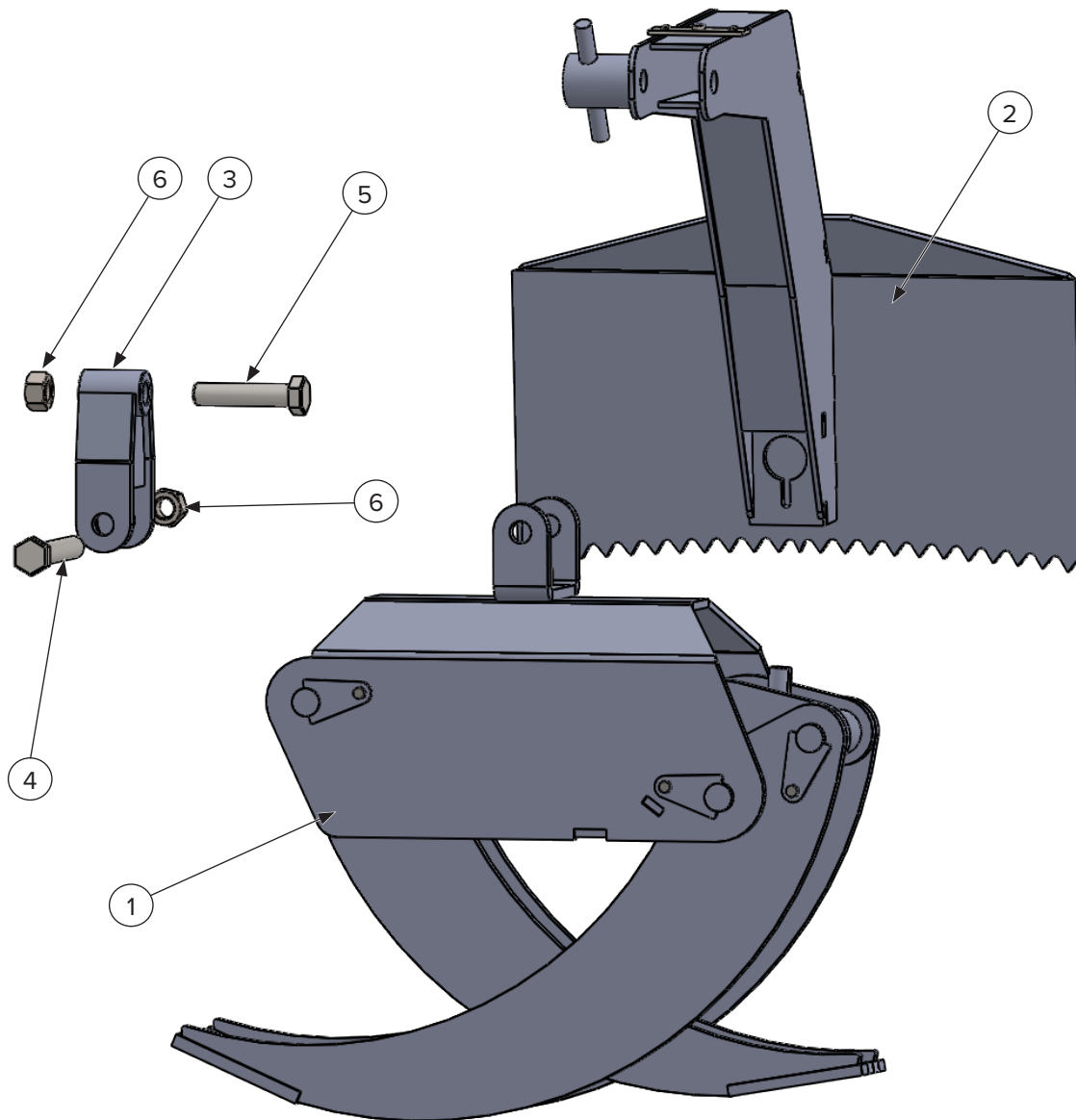
4. Maintenance

4.6 Troubleshooting

PROBLEM	CAUSE	SOLUTION
Hydraulic oil level goes down during operation.	Leak at hoses on the attachment	Investigate and repair.
	Leak in the prime mover hydraulic system	Investigate and repair.
Clamp does not open or close.	Quick disconnects not connected	Check and recouple quick disconnects.
	Hoses damaged	Check for a smashed or kinked hose. Replace if found.
	Skid steer auxiliary circuit inoperative.	Investigate and repair.
Clamp moves abnormally slow.	Restricted hose	Check for damaged hose between skid steer and clamp cylinder. If damaged, replace the hose.
	Bad circuit relief on skid steer	Investigate and repair.
	Auxiliary valve spool on skid steer not shifting properly	Investigate and repair.
	Grapple cylinder seals bypassing	Have cylinder repacked or replaced.
Rotation function is not working.	Button on the machine's joysticks not held while activating hydraulics	Press AND hold the button to activate hydraulics.
	Wire harness not pinned correctly	Confirm pin out in chart diagrams on page 29. Contact Blue Diamond® Product Support if needing further assistance.
	Wire harness not installed correctly	Check for proper installation.
	Wire harness damaged	Replace the wire harness.

5. Parts

5.1 Manual Rotation Breakdown



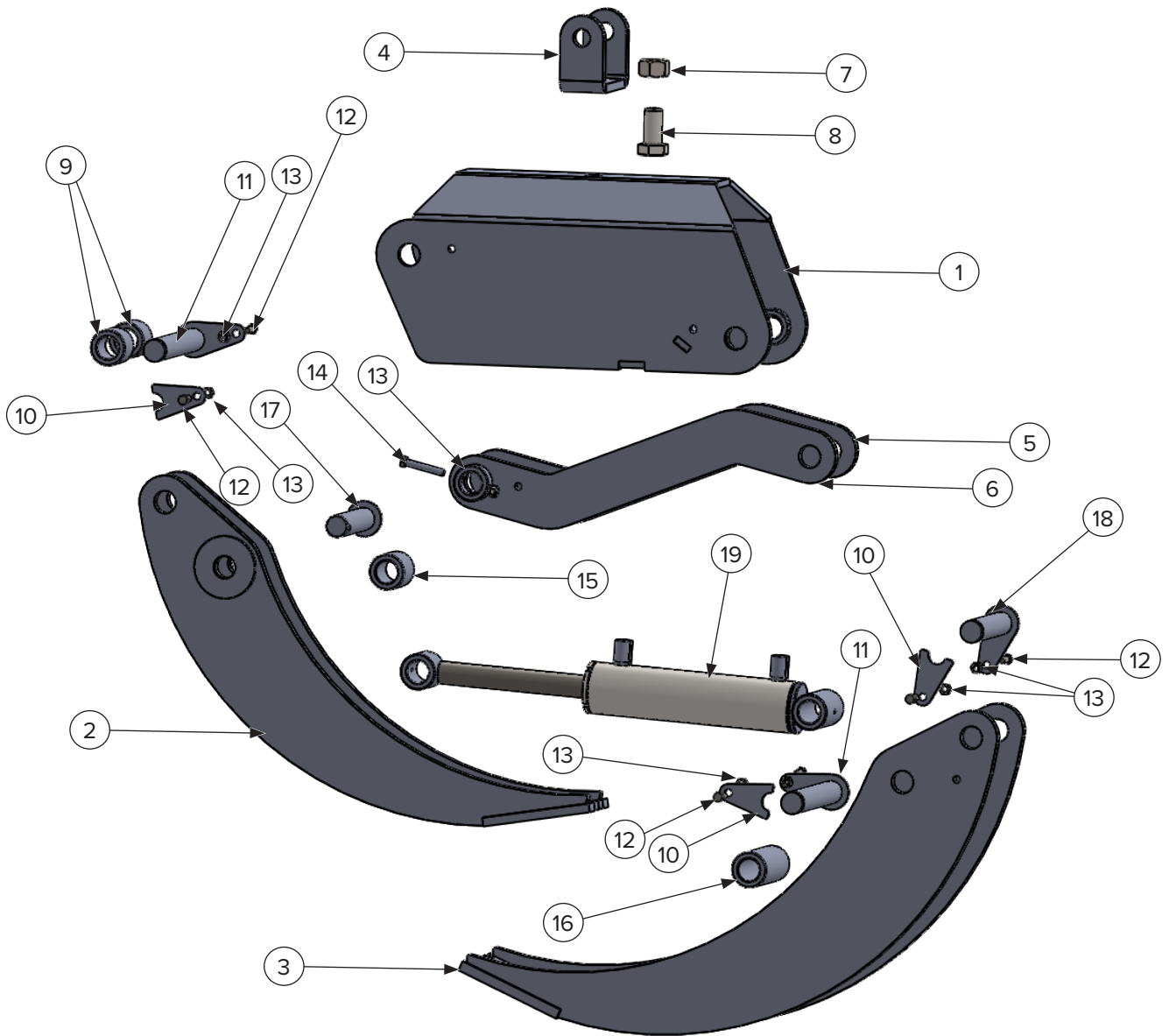
5. Parts

5.1 Manual Rotation Breakdown Cont'd

ITEM	PART NUMBER	DESCRIPTION	QTY
1	See pages 19 – 20	Grapple Assembly	1
2	206715	Full Size Skid Steer Mount Frame Assembly	1
	206715-16	Euro Ag Mount Frame Assembly	
	206715-25	Mini Universal Mount Frame Assembly	
	206715-26	Bobcat Mount Frame Assembly	
	206715-35	Avant Mount Frame Assembly	
	206715-36	ASV Mount Frame Assembly	
3	206721	Linkage Knuckle	1
4	299498	1"–8 x 6 1/2" Hex Head Bolt	1
5	299492	1"–8 x 5" Hex Head Bolt	1
6	299659	1"–8 Stover Nut	2

5. Parts

5.2 Manual Grapple Assembly Breakdown



5. Parts

5.2 Manual Grapple Assembly Breakdown Cont'd

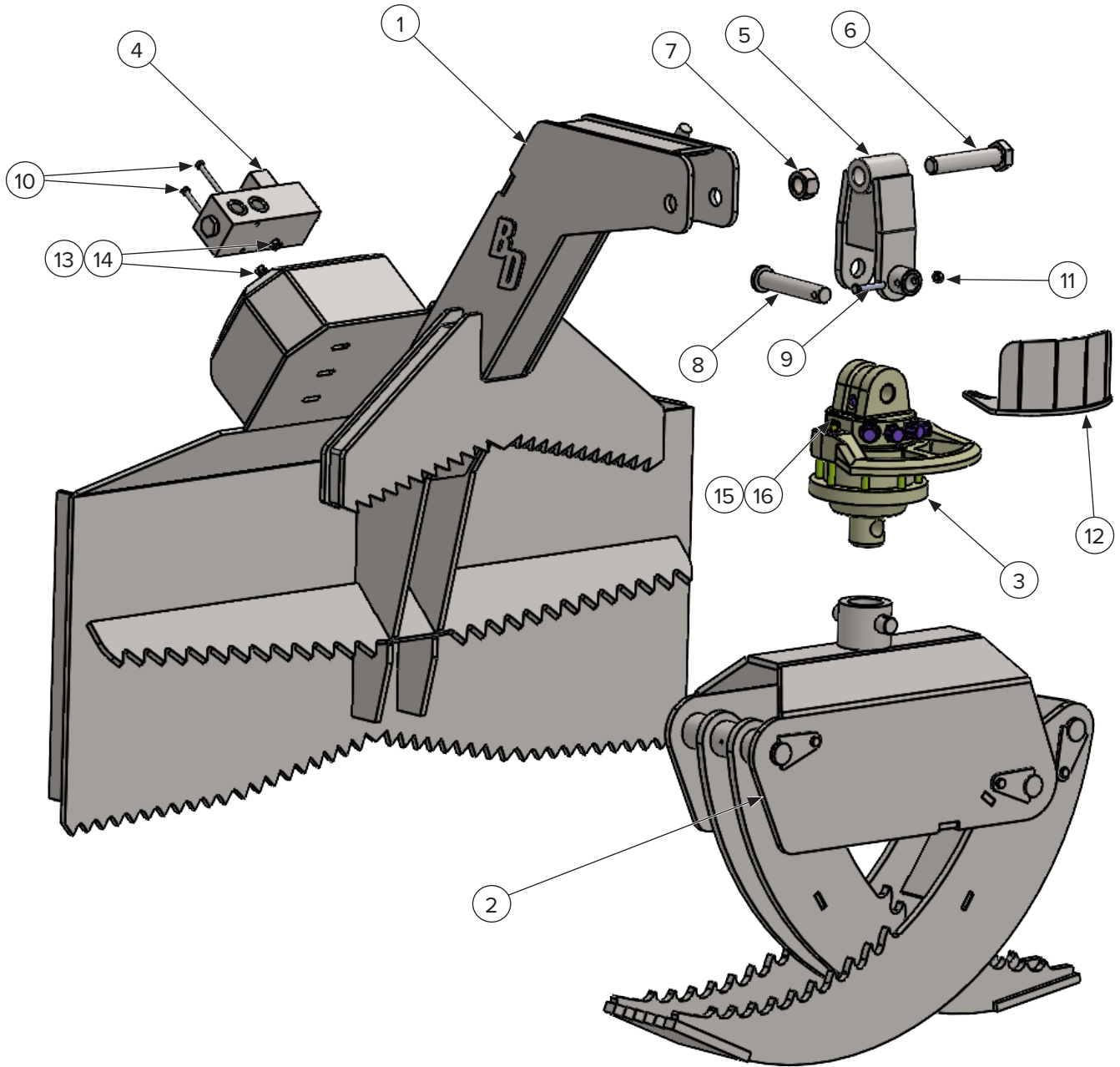
ITEM	PART NUMBER	DESCRIPTION	QTY
1	206729	Top Grapple Housing	1
2	206706	Inside Grapple Tine	1
3	206736	Outside Grapple Tine	1
4	206702	Top Mount Bracket	1
5	206704	Linkage Arm No Bushing	1
6	206731	Linkage Arm with Bushing	1
7	299659	1"–8 Stover Nut	1
8	299497	1"–8 x 2" Hex Head Bolt	1
9	—	1.8" Long Spacer Welded Bushing	2
10	206709	Pin Retainer Tab	3
11	206719	7 1/2" Pin / Tab Assembly	2
12	299423	3/8"–16 x 1" Hex Head Bolt	6
13	208550	3/8" Stover Nut	7
14	299329	3/8"–16 x 2 1/2" Hex Head Bolt	1
15	—	2 1/8" Welded Bushing	1
16	—	4 3/4" Welded Bushing	1
17	206725	Linkage Arm Pin	1
18	206720	5 5/8" Short Pin / Tab Assembly	1
19	208725	2 1/2" x 8" Hydraulic Cylinder	1

5.3 Manual Rotation Hydraulics Breakdown

ITEM	PART NUMBER	DESCRIPTION	QTY
1	206700	Machine Hoses with Hose Protection - 1/4" Diameter - 1/2" Female JIC to 1/4" Male ORB	1
2	224006	Male Coupler - 1/2" Body, #8 Female NPT	1
3	224005	Female Coupler - 1/2" Body, #8 Female NPT	1
4	295030-M06JIC-M08NPT	Coupler Fittings - #6 Male JIC to #8 Male NPT 90 degree	2

5. Parts

5.4 Hydraulic Rotation Breakdown



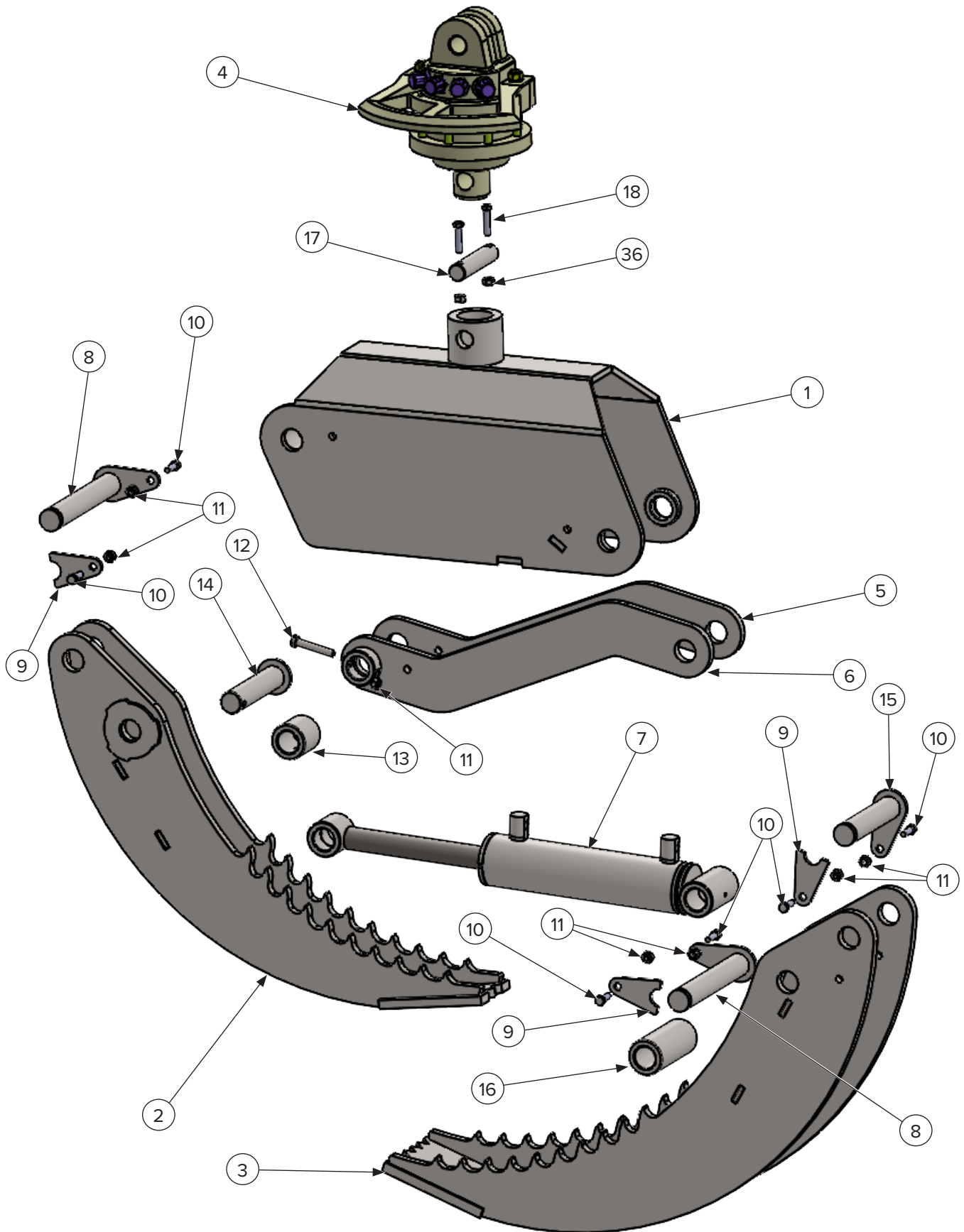
5. Parts

5.4 Hydraulic Rotation Breakdown Cont'd

ITEM	PART NUMBER	DESCRIPTION	QTY
1	206727	Full Size Skid Steer Mount Frame Assembly	1
	206727-16	Euro Ag Mount Frame Assembly	
	206727-25	Mini Universal Mount Frame Assembly	
	206727-26	Bobcat Mount Frame Assembly	
	206727-35	Avant Mount Frame Assembly	
	206727-36	ASV Mount Frame Assembly	
2	See pages 23 – 24	Grapple Assembly	1
3	206726	Hydraulic Rotator	1
4	206716	Hydraulic Rotator Valve	1
5	206710	Hydraulic Linkage Knuckle (Includes 206705)	1
6	299492	1"–8 x 5" Hex Head Bolt	1
7	299659	1"–8 Stover Nut	1
8	206705	Knuckle Lower Pin	1
9	299328	3/8"–16 x 2" Hex Head Bolt	1
10	299365	1/4"–20 x 2 1/2" Hex Head Bolt	2
11	208550	3/8" Stover Nut	1
12	206703	Rotator Hose Shield	1
13	299715	1/4" Washer	2
14	299653	1/4" Stover Nut	2
15	299015	M8 x 1.25mm x 30mm Socket Bolt	4
16	299721	5/16" Washer	4

5. Parts

5.5 Hydraulic Grapple Assembly Breakdown



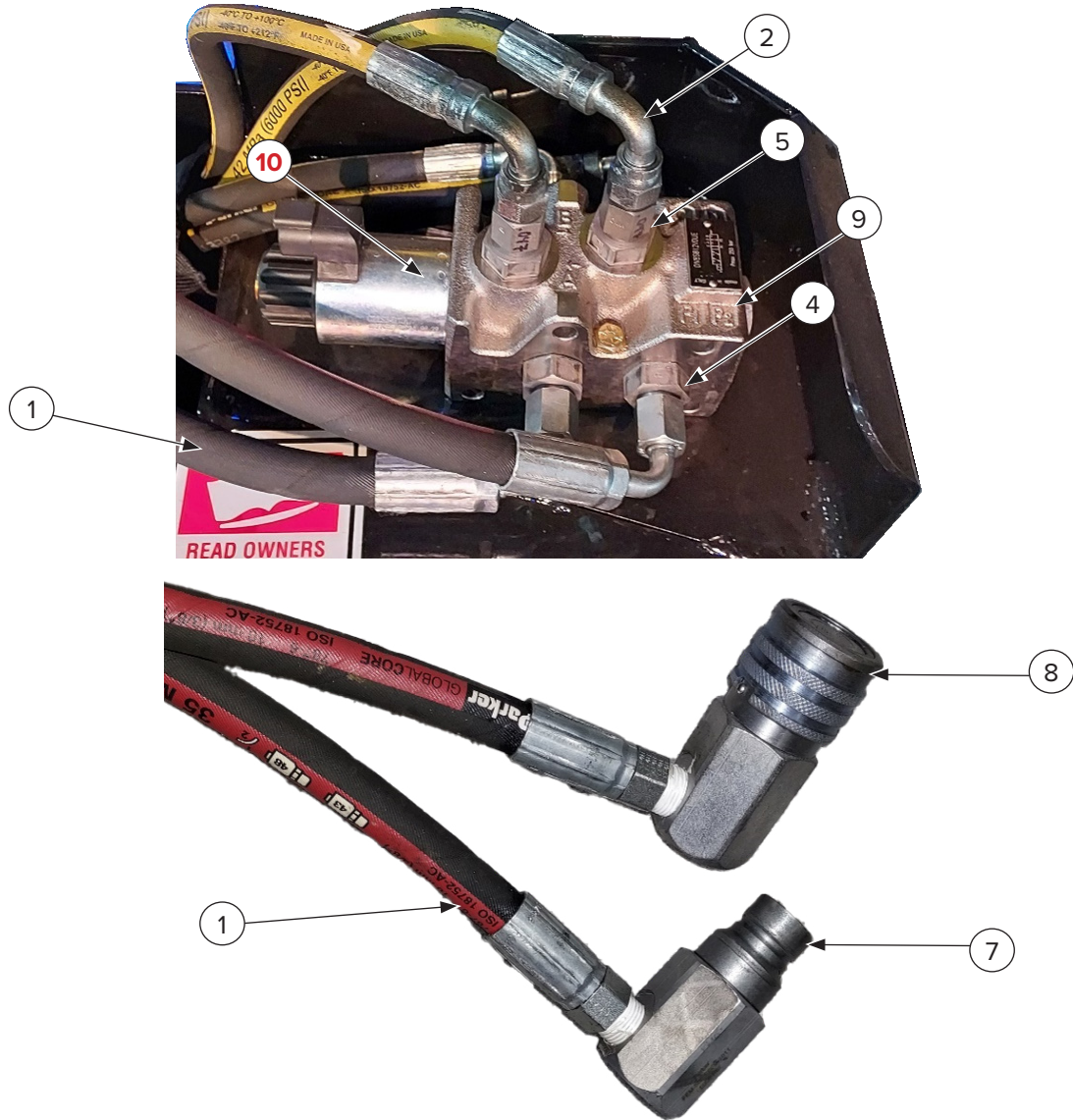
5. Parts

5.5 Hydraulic Grapple Assembly Breakdown Cont'd

ITEM	PART NUMBER	DESCRIPTION	QTY
1	206740	Hydraulic Housing	1
2	206706	Inside Grapple Tine	1
3	206736	Outside Grapple Tine	1
4	206726	Hydraulic Rotator	1
5	206704	Linkage Arm No Bushing	1
6	206731	Linkage Arm with Bushing	1
7	208725	2.5" x 8" Hydraulic Cylinder	1
8	206719	7 1/2" Pin / Tab Assembly	2
9	206709	Pin Retainer Tab	3
10	299423	3/8"-16 x 1" Hex Head Bolt	6
11	208550	3/8" Stover Nut	9
12	299329	3/8"-16 x 2 1/2" Hex Head Bolt	1
13	—	2 1/8" Welded Bushing	1
14	206725	Linkage Arm Pin	1
15	206720	5 5/8" Pin / Tab Assembly	1
16	—	4 3/4" Welded Bushing	1
17	206723	Rotator Pin	1
18	299428	3/8"-16 x 1 1/2" Hex Head Bolt	2

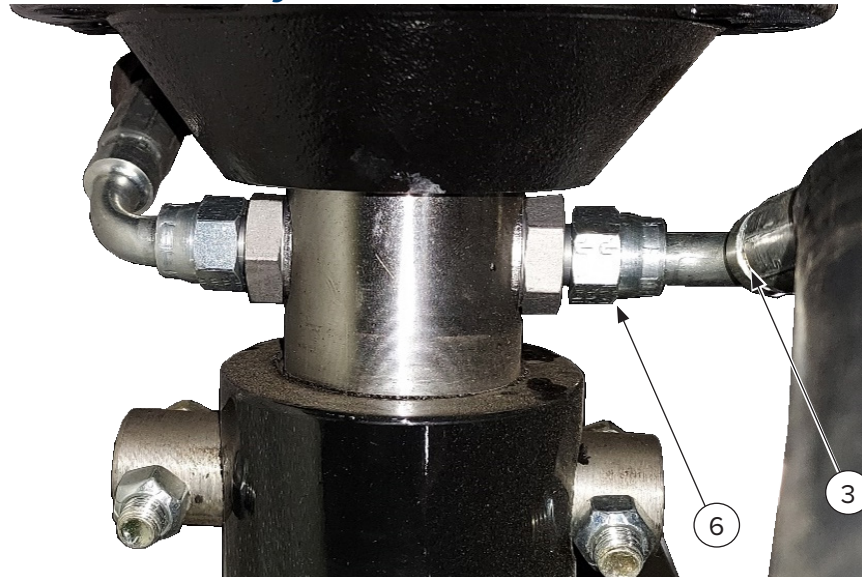
5. Parts

5.6 Hydraulic Rotation Hydraulics Breakdown



5. Parts

5.6 Hydraulic Rotation Hydraulics Breakdown Cont'd



ITEM	PART NUMBER	DESCRIPTION	QTY
1	206712	Machine Hose Set with Hose Wrap – 3/8" Diameter – 1/2" Female JIC 90 degree to #6 Male NPT	1
2	206713	Hose – Diverter Valve to Rotator (Mini Universal or Bobcat MT model) – 41" – 1/4" Diameter - #6 Female JIC 90 degree both ends (all hoses combined in hose wrap)	4
	206717	Hose – Diverter Valve to Rotator (Universal Skid Steer model) – 51" OAL – 1/4" Diameter – #6 Female JIC 90 degree both ends (all hoses combined in hose wrap)	4
3	206714	Rotator to Cylinder Short Hose – inside 1/2" Diameter Hose for protection – 22" Cut Length 1/4" Diameter – #6 Female JIC 90 degree to Male #4 ORB	1
	206728	Rotator to Cylinder Long Hose – inside 1/2" Diameter Hose for protection – 27" Cut Length 1/4" Diameter – #6 Female JIC 90 degree to Male #4 ORB	1
4	295010-M06JIC-M08ORB	Valve Block Hose Adapter Fittings – #8 Male ORB to #6 Male JIC	6
5*	295010-F06JIC-M06JIC-.047	Rotator Restrictor Fittings – #6 Male to Female JIC with 0.047" Orifice	2
6	295010-M06JIC-M08BSPPW	Rotator Hose Adapter Fittings – #6 Male JIC to #8 Male BSPP Type 'G' Washer Seal	6
7	224008	Male Coupler – 1/2" Body to Female #6 NPT 90 degree	1
8	224007	Female Coupler – 1/2" Body to Female #6 NPT 90 degree	1
9	206716	Diverter Solenoid Valve Assembly	1

*Revision 001 Serial Number >190000

5. Parts

5.7 Safety Decals

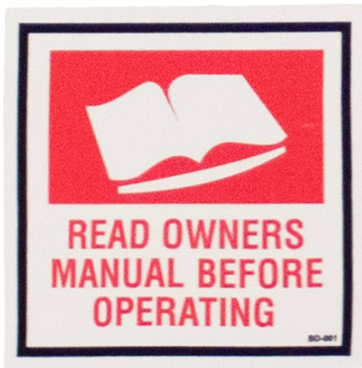
1



2



3



4



5



ITEM	PART NUMBER	DESCRIPTION	QTY
1	BD-060	Decal, Blue Diamond Attachments 2.4375" x 3.375"	3
2	BD-004	Decal, Grease All Fittings Every 8 Hours 2.0" x 4.0"	1
3	BD-001	Decal, Read Owner's Manual 3.0" x 3.0"	1
4	BD-123	Decal, High Pressure Fluid Hazard 3.0" x 3.0"	1
5	BD-092	Decal, Warranty Registration QR Code 1.5" x 2.0"	1

5. Parts

5.8 Wire Harnesses

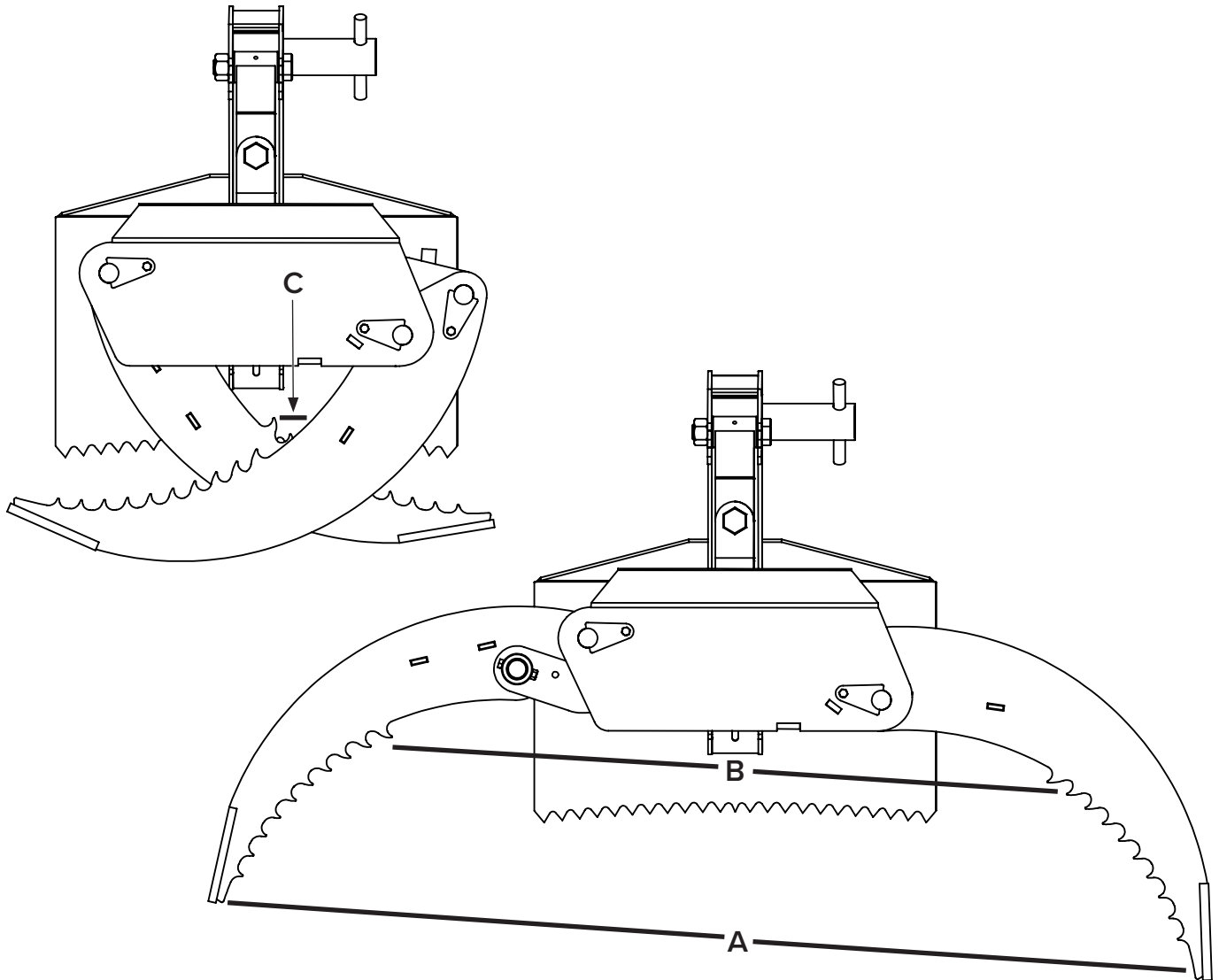
WIRE HARNESSES	DESCRIPTION
200010	Universal Control Box Kit – 12V Power
216900 + 200011	Universal 14–Pin Connection
216905 + 200011	Universal 8–Pin Connection
216951 + 200011	Bobcat 7–Pin Connection

216900 PIN CHART		
HOST MACHINE	BLACK (HOT)	WHITE (GND)
Bobcat, CASE, JCB, Kubota, New Holland, Takeuchi, Volvo	Pin D	Pin B
CAT D–Series	Pin E	Pin B
Deere	Pin D	Pin A

216905 PIN CHART		
HOST MACHINE	BLACK (HOT)	WHITE (GND)
ASV, CAT, Komatsu, Terex	Pin A	Pin B

6. Specifications

6.1 Attachment Specifications



DESCRIPTION	106715	106720	106815	106820
Lift Capacity	2000 lbs		2500 lbs	
Maximum Opening (A)	63.0"			
Upper Claw Minimum Grip (B)	42.5"			
Minimum Opening (C)	4.0"			
Hydraulic Flow	8–26 GPM			
Maximum Pressure	3200 PSI			
Weight	340 lbs.	370 lbs.	510 lbs.	565 lbs.

6. Specifications

6.2 Torque Specifications

Standard Hardware and Lock Nuts

BOLT TYPE	SAE GRADE 5		SAE GRADE 8		LOCK NUTS			
	Nominal Size	Plated or Unplated Silver	Plated W/ ZnCr Gold	Plated or Unplated Silver	Plated W/ ZnCr Gold	Plated or Unplated Silver	Plated W/ ZnCr Gold	W/ Grade 5 Bolt
1/4	55 in / lb (6.2 N•m)	72 in / lb (8.1 N•m)	86 in / lb (9.7 N•m)	112 in / lb (12.6 N•m)	121 in / lb (13.6 N•m)	157 in / lb (17.7 N•m)	61 in / lb (6.9 N•m)	86 in / lb (9.8 N•m)
5/16	115 in / lb (13 N•m)	149 in / lb (17 N•m)	178 in / lb (20 N•m)	229 in / lb (26 N•m)	250 in / lb (28 N•m)	325 in / lb (37 N•m)	125 in / lb (14 N•m)	176 in / lb (20 N•m)
3/8	17 ft / lb (23 N•m)	22 ft / lb (30 N•m)	26 ft / lb (35 N•m)	34 ft / lb (46 N•m)	37 ft / lb (50 N•m)	48 ft / lb (65 N•m)	19 ft / lb (26 N•m)	26 ft / lb (35 N•m)
7/16	27 ft / lb (37 N•m)	35 ft / lb (47 N•m)	42 ft / lb (57 N•m)	54 ft / lb (73 N•m)	59 ft / lb (80 N•m)	77 ft / lb (104 N•m)	30 ft / lb (41 N•m)	42 ft / lb (57 N•m)
1/2	42 ft / lb (57 N•m)	54 ft / lb (73 N•m)	64 ft / lb (87 N•m)	83 ft / lb (113 N•m)	91 ft / lb (123 N•m)	117 ft / lb (159 N•m)	45 ft / lb (61 N•m)	64 ft / lb (88 N•m)
9/16	60 ft / lb (81 N•m)	77 ft / lb (104 N•m)	92 ft / lb (125 N•m)	120 ft / lb (163 N•m)	130 ft / lb (176 N•m)	169 ft / lb (229 N•m)	65 ft / lb (88 N•m)	92 ft / lb (125 N•m)
5/8	83 ft / lb (112 N•m)	107 ft / lb (145 N•m)	128 ft / lb (174 N•m)	165 ft / lb (224 N•m)	180 ft / lb (244 N•m)	233 ft / lb (316 N•m)	90 ft / lb (122 N•m)	127 ft / lb (172 N•m)
3/4	146 ft / lb (198 N•m)	189 ft / lb (256 N•m)	226 ft / lb (306 N•m)	293 ft / lb (397 N•m)	319 ft / lb (432 N•m)	413 ft / lb (560 N•m)	160 ft / lb (217 N•m)	226 ft / lb (306 N•m)
7/8	142 ft / lb (193 N•m)	183 ft / lb (248 N•m)	365 ft / lb (495 N•m)	473 ft / lb (641 N•m)	515 ft / lb (698 N•m)	667 ft / lb (904 N•m)	258 ft / lb (350 N•m)	364 ft / lb (494 N•m)
1	213 ft / lb (289 N•m)	275 ft / lb (373 N•m)	547 ft / lb (742 N•m)	708 ft / lb (960 N•m)	773 ft / lb (1048 N•m)	1000 ft / lb (1356 N•m)	386 ft / lb (523 N•m)	545 ft / lb (739 N•m)

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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 Log Grapple 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. Please see bluediamondattachments.com/warranty-policies for the most up to date warranty information.

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



QUALITY | DEPENDABILITY | INTEGRITY

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