

Mini Skid Steer Series 2 Brush Cutter

Operation and Maintenance Manual



Register your
WARRANTY
within 30 days
of purchase



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BD-092

Introduction: Owner Information

Thank you for your decision to purchase a Blue Diamond® Mini Skid Steer Series 2 Brush Cutter 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 deck brace.

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

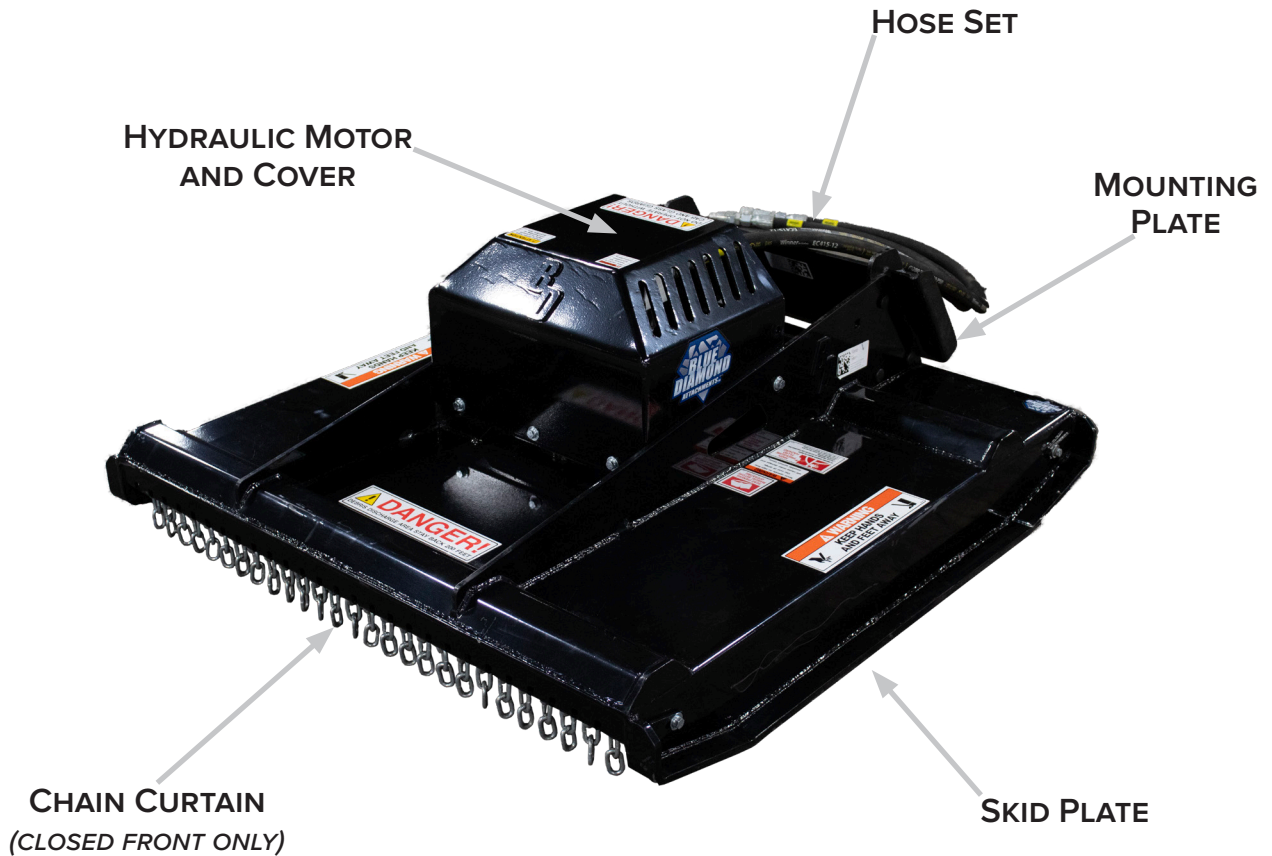
NOTE: The directions left, right, front and rear, as mentioned throughout this manual, are as viewed from the operator's position.

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1. Introduction

1.1 Attachment Identification



1.2 Attachment Model Numbers

MINI SERIES 2 BRUSH CUTTER			MOUNT	MODEL NUMBER
WIDTH	FRONT	FLOW		
36"	closed	9 – 20 GPM	Mini Universal	303716-25
			Bobcat MT compatible	303716-26
			Avant compatible	303716-35
42"	open	12 – 20 GPM	Mini Universal	303728-25
			Bobcat MT compatible	303728-26
			Avant compatible	303728-35
	closed	12 – 20 GPM	Mini Universal	303722-25
			Bobcat MT compatible	303722-26
			Avant compatible	303722-35
50"	closed	10 – 20 GPM	Mini Universal	303731-25
			Bobcat MT compatible	303731-26
			Avant compatible	303731-35

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.

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
- 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 possibly an auxiliary lighting system.

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.

He is to follow the given instructions in this manual and the machine operator's manual in order to obtain maximum performance, minimum consumption, and maximum safety for himself 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; the machine can project material from the back with risks of serious injury or death.
- 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 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.
- Keep shields and guards in place. Replace if damaged.
- 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 face shield, hard hat, gloves, hearing protection, and other protective clothing when required.

2. Safety

Machine Requirements and Capabilities

- The machine's operator's cab should be equipped with a thermoplastic polycarbonate or similar material front window, and similar protection on the sides of the operator's cab before operating the equipment.
- Keep bystanders clear of moving parts and the work area. Keep children away.
- Do Not exceed 3000 continuous PSI (206 bar) operating pressure.
- Use caution on slopes and near banks and ditches to prevent overturn.

Fire Prevention Safety

- Flammable debris (leaves, grass, etc.) must be removed regularly. If flammable debris is allowed to accumulate, it can cause a fire hazard. Clean often to avoid this accumulation.
- 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.



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

3. Operation

3.1 Attachment Inspection Guidelines

Pre-Operation Inspection

Before operating the Mini Series 2 Brush Cutter for the first time and each time thereafter, use the following list as a guideline during equipment inspection.



WARNING



AVOID SERIOUS INJURY OR DEATH

- Disengage machine's auxiliary hydraulics, engage the machine's parking brake, stop the engine and make sure all rotating components are completely stopped before connecting, disconnecting, adjusting, or cleaning equipment.
- Always keep shields and all guards in place when using the equipment.
- Disengage machine's auxiliary hydraulics for road travel.
- Keep hands, feet, and clothing away from rotating parts.

- Fully clean the attachment. See section 4.4 "Cleaning the Attachment" on page 18.
- Lubricate the attachment per the schedule outline in the Maintenance Section. See section 4.1 "Service Schedule" on page 16.
- Check the brush cutter mounting plate for damage. Check for loose or missing parts. Repair as needed before operation.
- Check that blades are in good condition. Sharpen or replace them, if necessary.
- Check that all shields and guards are in place.
- Check for loose bolts and tighten them if necessary.
- Check all welds on the attachment for wear and damage each time the attachment is removed from this machine.

- Check for damaged or missing safety decals. Replace if necessary.
- Inspect the machine's mounting frame. (See the machine's Operator's Manual for inspecting the mounting frame). Replace any parts that are damaged, bent or missing. Keep all fasteners tight. Look for cracked welds.



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 condition of all hydraulic components for leaks. Repair as required.

NOTE: Do not operate with hydraulic leaks.

- Verify that the brush cutter is properly connected to the machine.

3. Operation

3.1 Attachment Inspection Guidelines Cont'd

Daily Inspection

NOTE: Inspect the attachment by performing a walk around daily before and after use. Use the following inspection checklist as a guideline.

Check the following items every **10 hours** of operation:

- Verify that the brush cutter is properly connected to the machine.
- Check that all shields and guards are in place.
- Check hydraulic lines, connections, and fittings for hydraulic oil leaks. Repair or replace damaged parts if necessary.
- Check the brush cutter mounting hardware for wear or damage. Inspect the pins and mount (on the attachment) for wear or damage. Repair or replace damaged parts if necessary.

Weekly Inspection

Check the following items every **40 hours** of operation:

- Check blade bolts for correct torque 1440 ft/lb (1952 N•m).
- Check all bolts for tightness (see Section 6.2 “Torque Specifications” on page 28).
- Inspect the deck for cracks, bends, or damage.

Monthly Inspection

- Inspect the blades for cracks, bends, or excessive wear.
- Check the skid plates for wear.
- Check that all bolts are tight.
- Check blades and mounting plate for cracks or damage. Replace if necessary.
- Check blade mounting hardware for correct torque 1440 ft/lb (1952 N•m). Check mounting plate hardware.
- Check deck, shields, and guards. Repair if damaged or replace if necessary.
- Check for damaged or missing decals. Replace if necessary.
- Check for damaged or leaking hydraulic hoses or fittings. Replace if necessary.
- Clean all debris, leaves, grass, and flammable material from deck area and under covers.
- Lubricate as required.



WARNING



AVOID SERIOUS INJURY OR DEATH

- Always park on a flat level surface.
- Lower 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.**

3. Operation

3.2 Entering & Exiting the Prime Mover

! IMPORTANT !



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

Entering the Operator's Position

When in the operator's position, start the engine and release the parking brake.

See the mini skid steer operator's manual to correctly operate the machine.

Leaving the Operator's Position

! WARNING !

AVOID SERIOUS INJURY OR DEATH

- Always park on a flat level surface.
- Lower 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 park brake, stop the engine and wait for all moving parts to stop. Leave the operator's position.

3.3 Attachment Installation

Connecting Attachment To The Machine

! WARNING !



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.

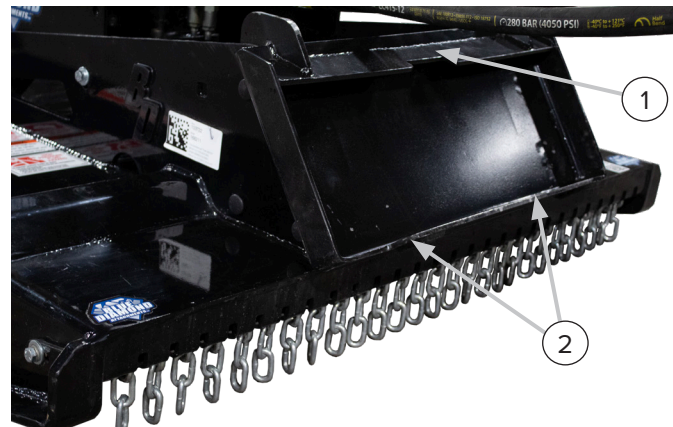


Figure 1

Inspect the brush cutter's mounting flange (Item 1), wedge mounts (Item 2) [Figure 1], mount hardware, and all welds for wear or damage each time the brush cutter is removed from the machine.

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

3. Operation

3.3 Attachment Installation Cont'd

Connecting Attachment to the Machine Cont'd

Enter the operator's position. See "Entering the Operator's Position" on page 11.

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 11.



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 the 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 11.

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 11.

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

3.4 Operating the Attachment

Machine Requirements

CUTTER SIZE	HYDRAULIC FLOW	WEIGHT (NO MOUNT)
36" Cutter	9 – 20 GPM	500 lbs
42" Cutter	12 – 20 GPM	600 lbs
50" Cutter	10 – 20 GPM	800 lbs

NOTE: Exceeding maximum hydraulic flow will over-speed the drive motor and result in motor failure.

Operation

 **WARNING** 



THROWN OBJECTS OR ROTATING BLADES CAN CAUSE SERIOUS INJURY OR DEATH

- Clear work area of all debris, such as rope, wire, cable or other materials that can wrap around blade carrier and blades, causing entanglement and attachment damage.
- **DO NOT** operate brush cutter in vicinity of bystanders, animals, or damageable property. Objects can be thrown more than several hundred feet.
- Keep all shields installed. Repair or replace if damaged or missing.
- Check blade carrier, blades and mounting hardware. Replace if damaged. Never weld or modify.

Travel Position

Lift the attachment 4 – 6 inches off the ground when traveling between one side and another.

 **DANGER** 

ROTATING BLADES WILL CAUSE SERIOUS INJURY OR DEATH

- Never put hands, feet or objects into or under brush cutter when engine is running.
- Keep bystanders away.
- No riders.
- Stop engine before leaving the machine to service.

3. Operation

3.4 Operating the Attachment Cont'd

Travel Position Cont'd

 **WARNING** 



Never allow riders on the brush cutter.

 **IMPORTANT** 

DO NOT operate brush cutter when excessive vibration is present. Serious damage can result. Check blade carrier, blades, and mounting hardware. Replace if damaged.

NOTE: The ground conditions and the type of brush being cut will determine the best cutting procedure and ground speed. The Mini Skid Steer Series 2 Brush Cutter is designed to cut short or tall grass, brush, and small trees up to 3 in (76 mm) in diameter.

Clearing Work Area

 **IMPORTANT** 

- DO NOT operate in a work area that has not been cleared of foreign debris and obstacles.
- Rocks, metal, construction debris, and other objects can damage the blade carrier and blades.
- Clearly mark any objects that cannot be removed.



Initial Setup

Starting the Cutter

Install the Mini Skid Steer Brush Cutter onto the machine.

Move to the operator's position, start the engine and release the parking brake.

Raise the mini skid steer brush cutter approximately 6 inches (152 mm) off the ground.

With the mini skid steer engine RPM just above idle, engage the auxiliary hydraulic flow (see the mini skid steer operator's manual) to the cutter head.

Slowly raise the mini skid steer engine RPM to the correct and desired cutter speed.

 **CAUTION** 

DO NOT exceed 3000 continuous PSI operating pressure. Serious damage can result.

3. Operation

3.4 Operating the Attachment Cont'd

Initial Setup Cont'd

Stopping the Cutter

Position the mini skid steer brush cutter approximately 6 inches (152 mm) off the ground.

Disengage the auxiliary hydraulic flow (see the mini skid steer operator's manual) to the cutter head.

Cutting Procedures



To minimize larger cut material discharging to the rear, always keep the machine between material being cut (work area) and buildings, occupied areas, or roadways.

Brush Cutting

Because hydraulic flow may be affected while raising the cutter, it is best to work from top down. Lift the cutter to the height needed to begin cutting.

NOTE: Always keep the angle of the blades on a plane or angle so blades are never visible from the operator's position.

Engage auxiliary hydraulics to begin blade rotation. Slowly lower mini skid steer arms, bringing the brush cutter straight down as possible.

Always keep the brush cutter tilted away from the operator's position by correcting the angle as you drop.

Grass Cutting

Set the brush cutter on the ground and then raise it up a few inches from the ground.

Engage auxiliary hydraulics to begin blade rotation. Be careful to compensate for rising or falling ground as you may need to raise or lower brush cutter to compensate.

Tree Cutting



WARNING



Never allow blades to be visible from the operator's position, this means you are in the direct line of discharge.

Keep the bottom of the brush cutter pointed away from the cab, raise the brush cutter to the top of tree / brush you intend to cut.

Engage auxiliary hydraulics to begin blade rotation. Slowly lower mini skid steer arms, bringing the brush cutter straight down as possible.

NOTE: Avoid positioning the center of the blade carrier directly over the material being cut.

Position larger material toward the end of the blades when lowering the brush cutter directly down on trees or brush.

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	•					
Hydraulic Motor	•	•				
Blades (wear, damage, and loosening)	•					
Blade Carrier	•					
All Hardware	•					
Deck	•	•				
Weekly Maintenance (or every 40 hours)						
Blade Bolt Torque - 500 ft/lb (678.0 N·m)	•					
All Hardware	•					
Deck (cracks, bends, or damage)	•					
Mount (cracks, bends, or damage)	•					
Monthly Maintenance						
Blades (cracks, bends, or excessive wear)	•					
Skid plates	•					
All Hardware	•					
1000 Hour Maintenance						
Drive Assembly			•			



4. Maintenance

4.2 Drive Assembly

Lubrication



Fluid such as hydraulic fluid, coolants, grease, etc. must be disposed of in an environmentally safe manner. Some regulations require that certain spills and leaks on the ground must be cleaned in a specific manner. See local, state, and federal regulations for the correct disposal.

Replace the oil in the direct drive assembly every 1000 hours.

4.3 Blade Assembly

Blade Tightening / Replacement



AVOID SERIOUS INJURY OR DEATH

Before servicing the Brush Cutter:

- Lower and place the brush cutter on flat, level surface.
- Engage parking brake, stop engine, and exit the machine.
- Disconnect attachment hydraulic hoses.



Figure 2

Remove the two bolts (Item 1) [Figure 2] and cover to access the blade nut.

Tightening Blade Bolts

Tighten bolts and nuts to 1440 ft/lb (1952 N•m) of torque.

Turn blade carrier by hand to align the next blade nut with the access hole.

Repeat procedure until all blade nuts and bolts have been tightened.

Reinstall cover.

Blade Removal

Remove the nut and bolt from the blade. Remove blade.

Turn blade carrier by hand to align the next blade nut with the access hole.

Repeat procedure until all blade nuts and bolts have been removed.

NOTE: Blue Diamond recommends replacing the bolt and nut every time the blades are changed.

Blade Installation

Align blade with the hole in the blade carrier. Push the bolt up through the blade into the blade carrier.

NOTE: Verify that blade bolt is fully seated.

Thread nut on blade bolt. Tighten nut to 1440 ft/lb (1952 N•m) of torque.

Turn blade carrier to align remaining blade mounting holes.

Repeat procedure until all blades have been installed.

Reinstall cover.

4. Maintenance

4.4 Cleaning the Attachment



DANGER



AVOID SERIOUS INJURY OR DEATH

Before servicing the Brush Cutter:

- Raise the arms and tilt brush cutter fully forward (down) until the front of the brush cutter contacts the ground.
- Engage parking brake, stop engine, and exit the machine.
- Disconnect attachment hydraulic hoses.

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 11.

Disconnect attachment hydraulic hoses from the machine.

Enter the operator's position. See "Entering the Operator's Position" on page 11.

Slowly raise the machine's arms, while tilting the brush cutter forward (down) until the front of the brush cutter contacts the ground.

Stop the engine, engage the parking brake, and leave the operator's position. See "Leaving the Operator's Position" on page 11.

Use water or air pressure to clean debris from under the brush cutter deck.

Be careful when removing any obstructions that are wrapped around either the blades or the blade carrier.

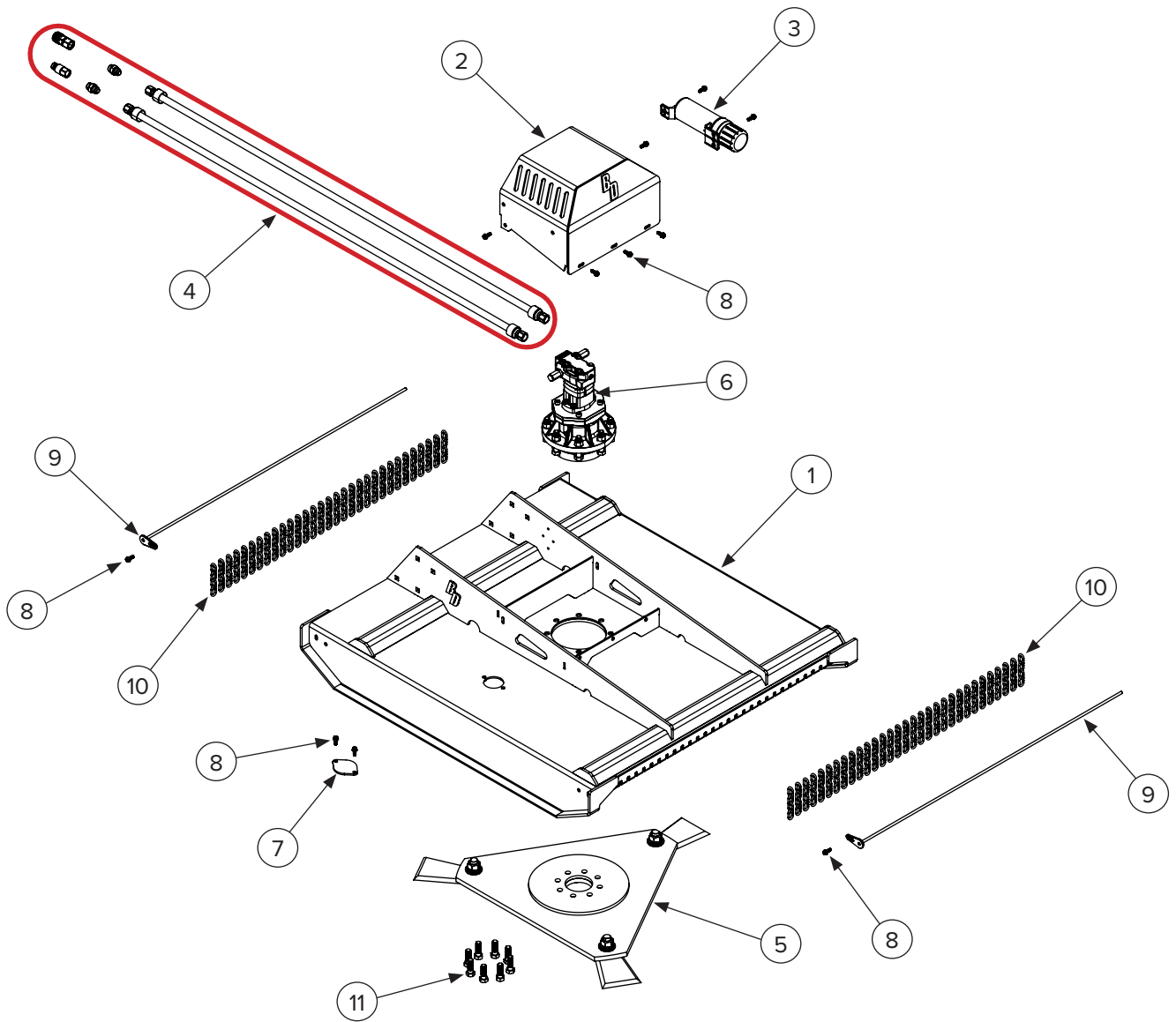
4. Maintenance

4.5 Troubleshooting

PROBLEM	CAUSE	SOLUTION
Cutter bogs down.	Dull blades.	Remove and sharpen blades.
	Ground speed too fast.	Slow down ground speed.
	Cutter speed too slow.	Raise engine RPMs or investigate other low oil flow problems. Contact machine dealer or your Blue Diamond Attachments® Product Support Department.
Vibration felt when running cutter.	Missing, loose, damaged, or unbalanced cutter blades.	Replace blades with new or resharpened and equally balanced blades.
	Blade carrier damaged.	Replace blade carrier.
	Drive housing loose on deck.	Tighten & torque drive mounting bolts. Replace bolts if they are damaged.
	Cutting height too low for cutting in sandy or rocky soils.	Raise cutter height.
Blades get dull too quickly.	Blades have contacted solid objects (rocks, steel pipes, etc.)	Clear cutting area of solid objects before hitting them, or raise the cutter height to clear exposed rock surfaces.
Blades breaking.	Excessive shock loads.	Avoid hitting solid objects (rock, steel pipes, large tree stumps, etc.)
Hydraulic oil level goes down during operation.	Leak at cutter motor or other plumbing.	Investigate & repair. Contact your Blue Diamond Attachments® Product Support Department.
	Leak in machine hydraulic system.	Investigate & repair. Contact your machine dealer.
Blades do not spin when auxiliary hydraulics are activated.	Hydraulic motor failed.	Possible excessive hydraulic system pressure. Contact your machine dealer.
	Drive seized.	Remove motor to isolate problems. Spin blade carrier by hand to check drive.

5. Parts

5.1 Parts Breakdown



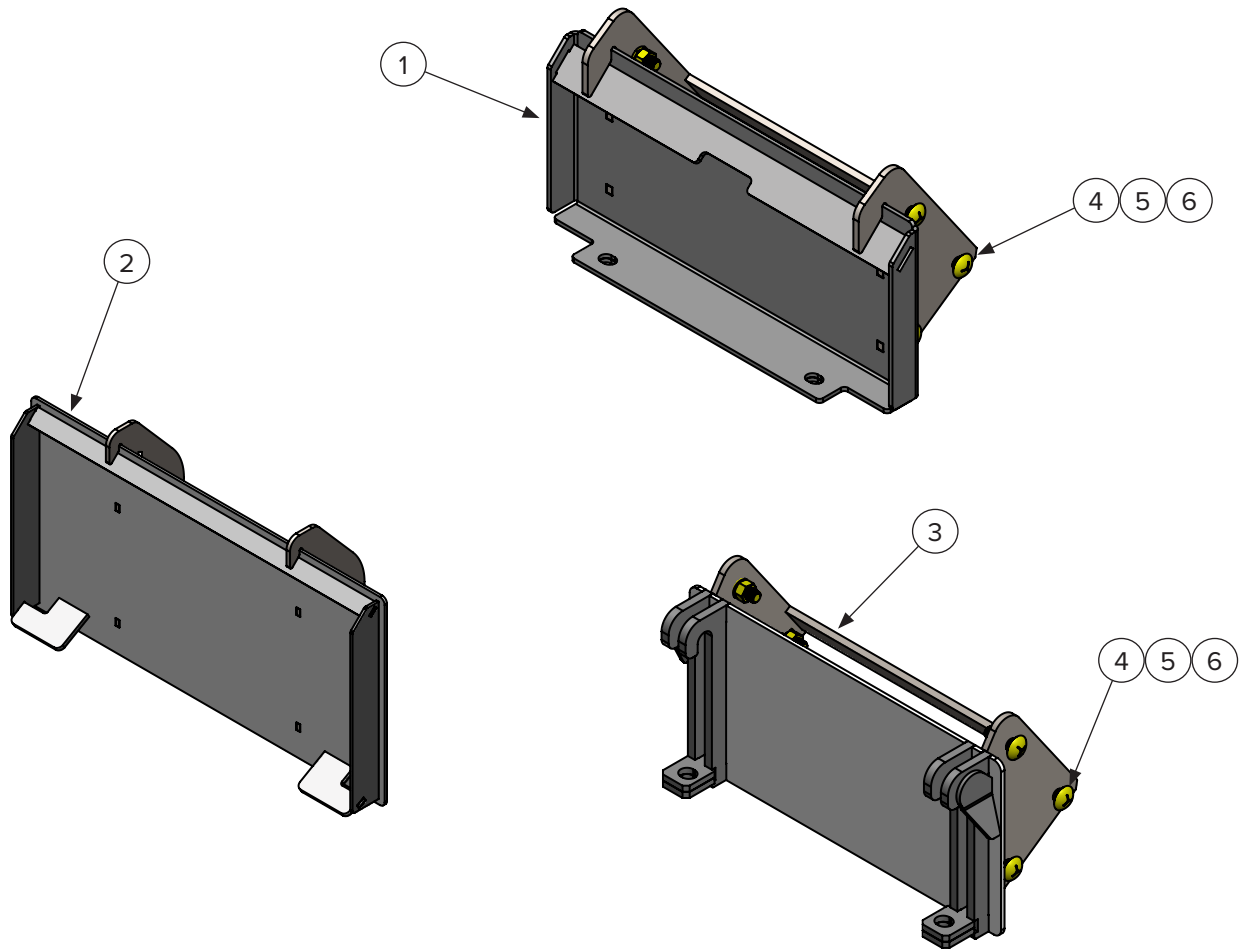
5. Parts

5.1 Parts Breakdown Cont'd

ITEM	PART NUMBER	DESCRIPTION	QTY 36" Closed	QTY 42" Closed	QTY 42" Open	QTY 50" Closed
1	203726	Deck Weldment 36" Closed Front	1	—	—	—
	203727	Deck Weldment 42" Closed Front	—	1	—	—
	203146	Deck Weldment 42" Open Front	—	—	1	—
	203728	Deck Weldment 50" Closed Front	—	—	—	1
2	203161	Motor Cover	1	1	1	1
3	216402	Manual Tube	1	1	1	1
4	See Hose Set on Page 23	Hose Set	1	1	1	1
5	See Blade Carrier on Page 25	Blade Carrier Assembly	1	1	1	1
6	See Drive Assembly on Page 24	Drive Assembly	1	1	1	1
7	203008	Inspection Cover	1	1	1	1
8	203006	3/8-16 X 1 Serrated Flange Thread Cutting Bolt	11	11	11	11
9	203605	Chain Retainer Bar 36"	2	—	—	—
	203655	Chain Retainer Bar 42"	—	2	1	—
	203695	Chain Retainer Bar 50"	—	—	—	2
10	203600	3-Linkage Discharge Chain	46	54	26	—
	203045	4-Linkage Discharge Chain	—	—	—	62
11	299469-F	3/4-16 X 2-1/4" Hex Bolt	8	8	8	8

5. Parts

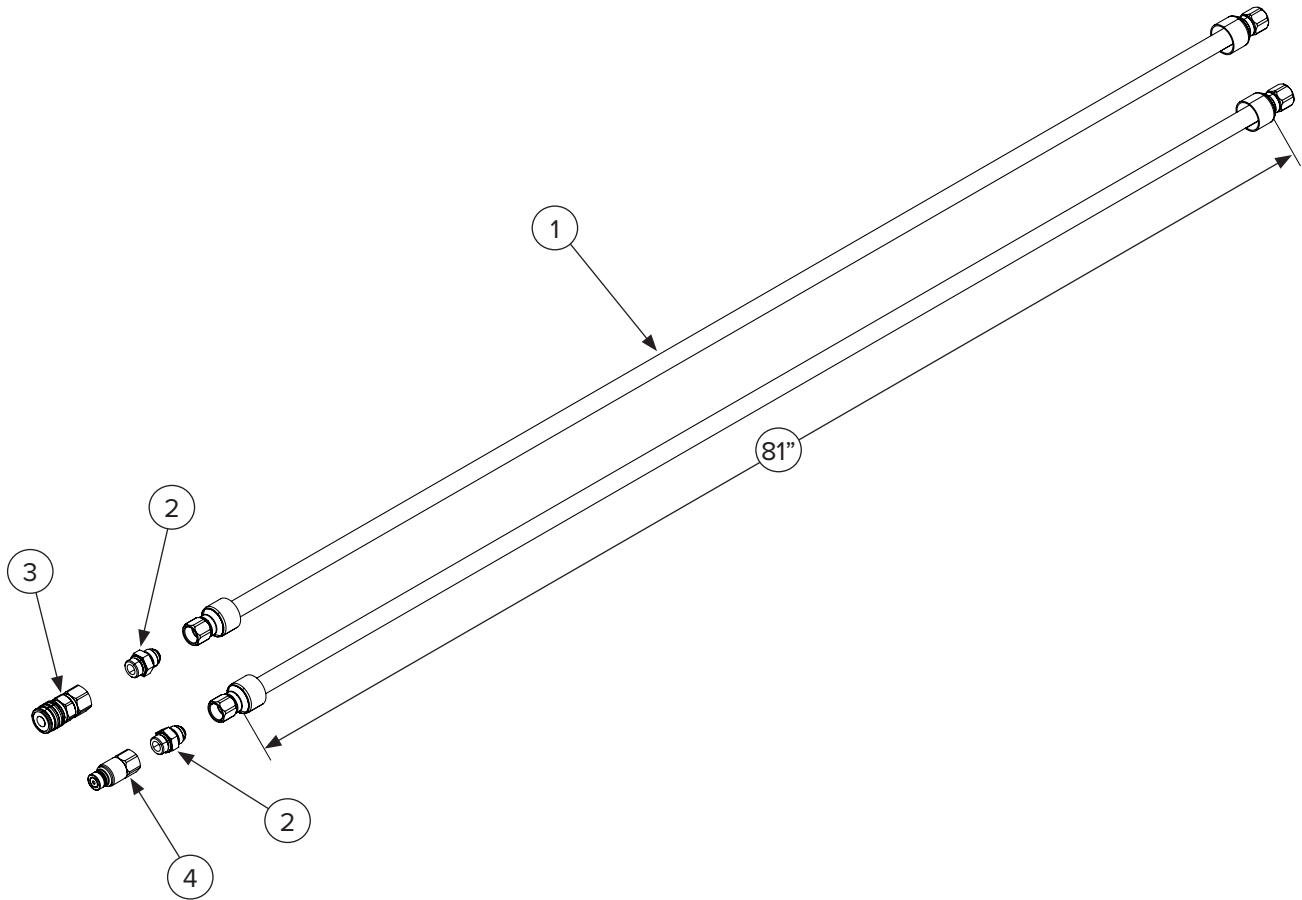
5.2 Mount Options



ITEM	PART NUMBER	DESCRIPTION	QTY —25	QTY —26	QTY —35
1	103740-25	Mount Plate — Compatible with Mini Universal Mount			
2	103740-26	Mount Plate — Compatible with Bobcat MT			
3	103740-35	Mount Plate — Compatible with Avant			
4	220827	5/8-11 X 2" Carriage Bolt	6	8	6
5	299845	5/8" Lock Washer	6	8	6
6	109177	5/8-11" Locknut	6	8	6

5. Parts

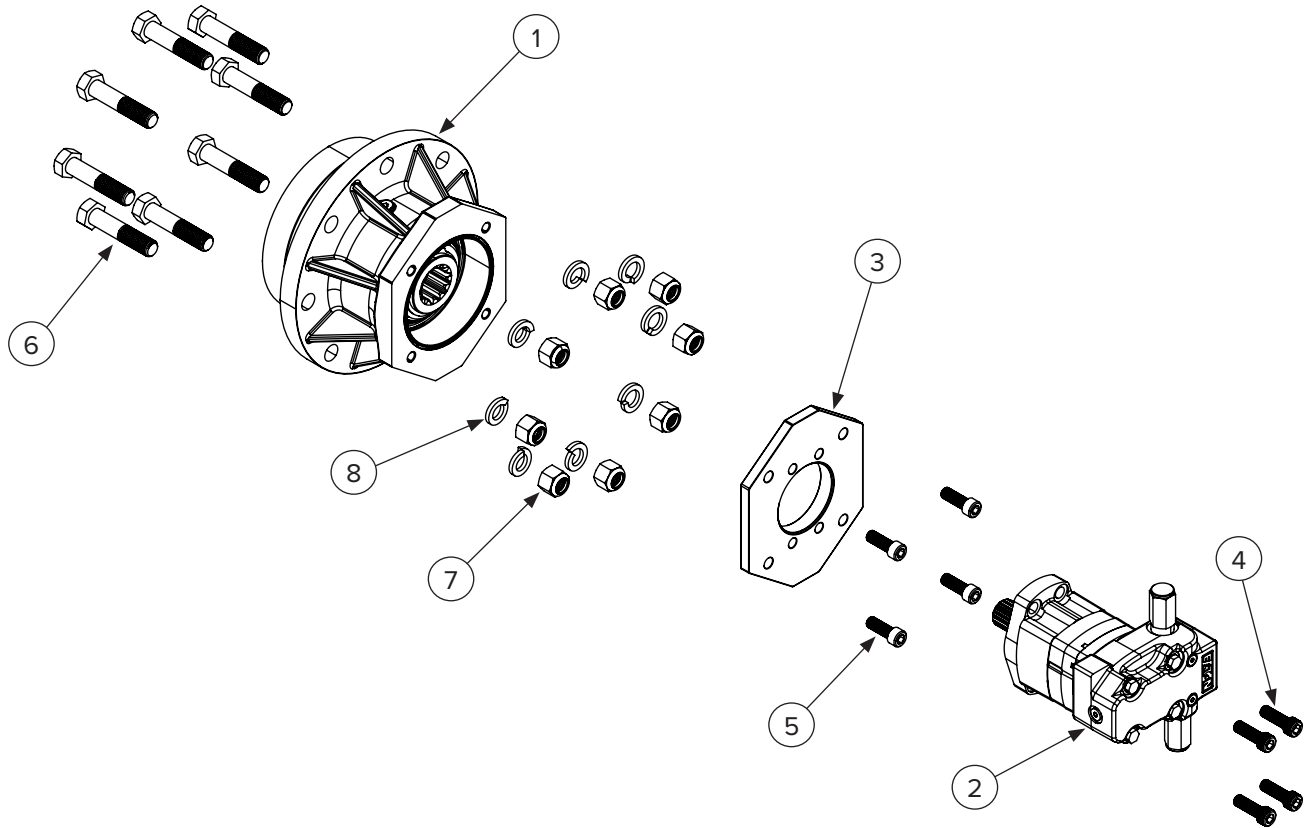
5.3 Hose Set



ITEM	PART NUMBER	DESCRIPTION	QTY
1	203792	Machine Hoses with Sleeve	2
2	295010-M12JIC-M12ORB	Hydraulic Fitting M12 JIC to M12 ORB	2
3	224011	Female Hydraulic Quick Coupler	1
4	224012	Male Hydraulic Quick Coupler	1

5. Parts

5.4 Drive Assembly

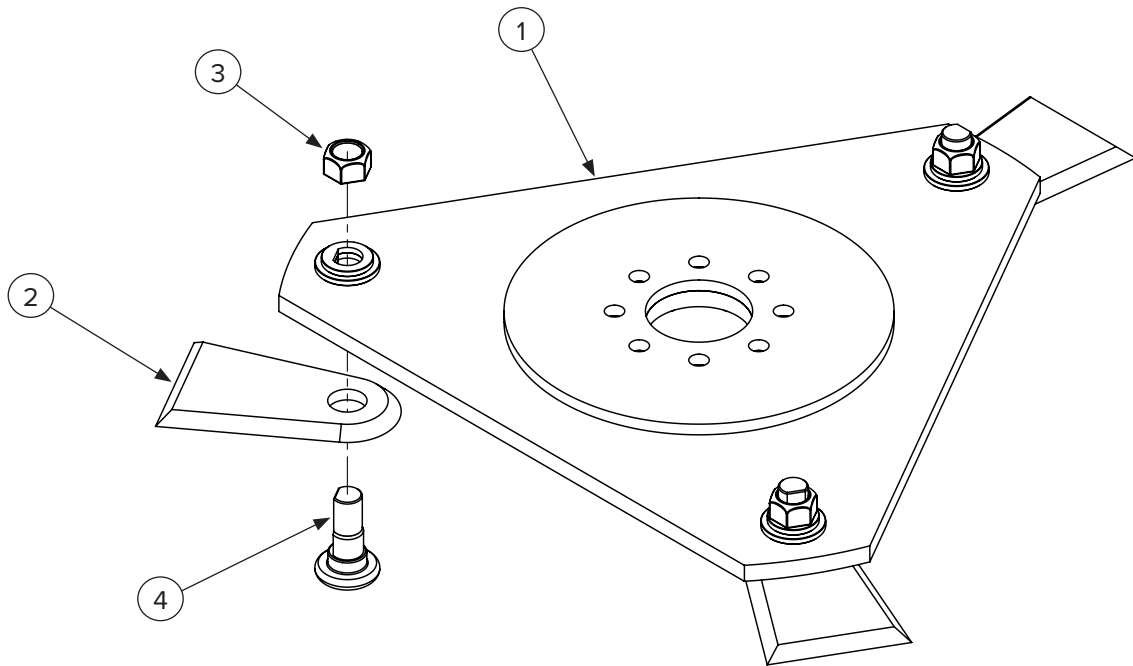


ITEM	PART NUMBER	DESCRIPTION	QTY
1	BC75-SAE-C	Direct Drive	1
2	203790	Motor with Magneto Flange and Integrated Reliefs	1
	203760*	Motor with C-Flange and Valve Block	1
3	203148-14	Motor to Drive Adapter Plate	1
4	299463-A	1/2-20 X 1-1/2" Motor to Flange Socket Head Bolts	4
5	299478	1/2-20 X 1-3/8" Flange to Drive Socket Head Bolts	4
6	299470	3/4-10 X Direct Drive Bolts	8
7	299628	3/4-10 Direct Drive Nuts	8
8	299856	3/4" Direct Drive Lock Washer	8
NS	203770*	Valve Block for 203760	1
NS	203771*	Valve Block Mount Bolts for 203770	2
NS	203908*	Valve Block to Motor White O-Ring	2

* Before August 2023

5. Parts

5.5 Blade Carrier



ITEM	PART NUMBER	DESCRIPTION	QTY
1	203626	Blade Carrier 36"	1
	203148	Blade Carrier 42"	1
	203723-2	Blade Carrier 50"	1
2	203620	Blade for 36"	3
	203670	Blade for 42"	3
	203720	Blade for 50"	3
3	203030	Blade Nut	3
4	203035	Blade Bolt	3

5. Parts

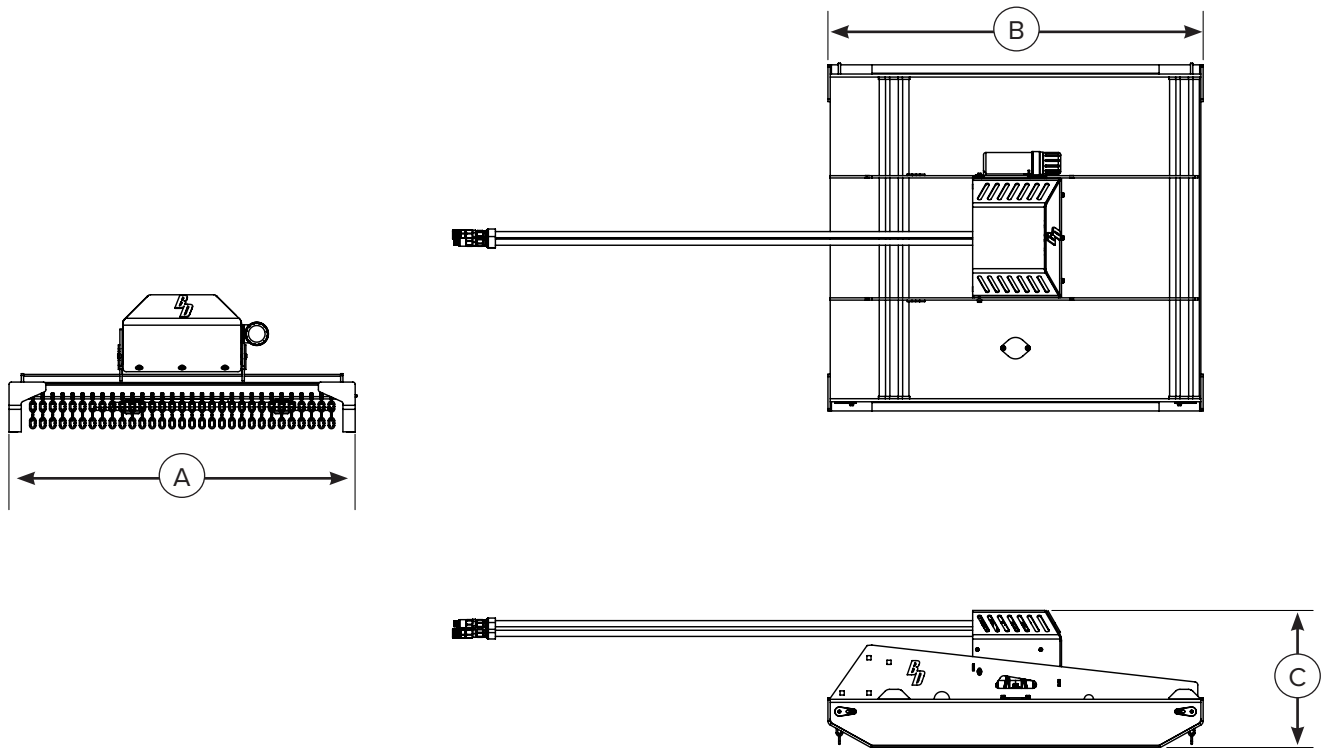
5.6 Decal Identification & Location



ITEM	PART NUMBER	DESCRIPTION	QTY
1	BD-081	Warning: Keep Hands and Feet Away	2
2	BD-119	Attention: Clean Motor Area	1
3	BD-008	Important: See Owner's manual for Lubrication Instructions	1
4	BD-053	Danger: Do Not Operate without Cab and Glass Guards	1
5	BD-113	Blue Diamond Decal	2
6	BD-001	Read Owner's Manual	1
7	BD-072	Warning: Do not use over 26 GPM	1
8	BD-007	Hazard: High Pressure Fluid	1
9	BD-055	Danger: Debris Discharge Area	1
10	BD-060	Blue Diamond Decal Small	1
NS	BD-092	Register Warranty	1

6. Specifications

6.1 Attachment Specifications



DESCRIPTION	36"	42"	50"
Overall Width (A)	44"	50"	57"
Overall Length (B)	44"	50"	61"
Overall Height (C)	21"		
Cutting Height	2"		3.5"
Cutting Width	36"	42"	50"
Weight (No mount)	500 lbs	600 lbs	800 lbs
Blade Type	Double edged		
Blade Rotation	Bi-directional		
Blade Count	3		
Drive Type	Direct Drive		
Flow (GPM)	9 – 20	12 – 20	10 – 20
Max Pressure (PSI)	3000		

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)



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 Mini Skid Steer Series 2 Brush Cutter 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

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