

# 35-TON INVERTED LOG SPLITTER

Operation and Maintenance Manual



150015



*Register your  
WARRANTY  
within 30 days  
of purchase*



888-376-7027 | BlueDiamondAttachments.com

Blue Diamond@Attachments



## Owner Information

Thank you for your decision to purchase a Blue Diamond Inverted log splitter. 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](http://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.

**Figure 1**

**Model Number:** \_\_\_\_\_

**Serial Number:** \_\_\_\_\_

**Dealer Name:** \_\_\_\_\_

**Dealer Number:** \_\_\_\_\_

**Date of Purchase:** \_\_\_\_\_

The serial number plate (Item 1) **[Figure 1]** is located on right side, just forward of the attachment mounting plate.

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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## Safety Information



**SAFETY ALERT SYMBOL**

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



**DANGER**

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



**WARNING**

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



**CAUTION**

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



**IMPORTANT**

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

## Safe Operation Needs A Qualified Operator



**WARNING**

### 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.

### 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.



## Importance of Safety

### Operating Safety

- Read and follow instructions in this manual and the machine's Operators 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 safety glasses, gloves, hearing protection and other protective clothing when required.

### 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 3,600 psi (245) operating pressure.
- Use caution on slopes and near banks and ditches to prevent overturn.

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## Importance of Safety Cont'd

### Fire Prevention Safety

- Flammable debris (leaves, grass, sticks, 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 brush cutter on a truck or trailer, make sure the brush cutter 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.

# Attachment Inspection

## 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 log splitter 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 log splitter 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 all bolts for tightness.  
3/8" bolts to 50 ft/lb (67.5 N•m) torque.  
1/2" bolts to 100 ft/lb (135 N•m) torque.  
3/4" bolts to 223 ft/lb (302 N•m)
- Inspect the main frame and wedge for cracks, bends, or damage.

## Monthly Inspection

- Inspect the main frame and wedge for cracks, bends, or excessive wear.
- Check that cylinders protection cover is in good condition and truly attached.
- Check that all bolts are tight.
- Check for damaged or missing decals. Replace if necessary.
- Check for damaged or leaking hydraulic hoses or fittings. Replace if necessary.
- Clean all debris, sticks, leaves, grass and flammable material from deck area and under covers.
- Lubricate as required.



**WARNING**



**AVOID SERIOUS INJURY OR DEATH**

**Before servicing the attachment:**

- **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.**
- **Wait for all moving parts to stop.**
- **Stop the engine and remove the key.**

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

## Attachment Installation

**! IMPORTANT !**



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, lower safety seat bar, start the engine and release the parking brake.

### Leaving The Operator's Position

**! WARNING !**

#### AVOID SERIOUS INJURY OR DEATH

**Before leaving the operator's position:**

- 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.

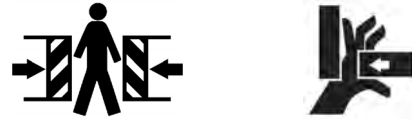
**SEE MACHINE'S OPERATOR'S MANUAL FOR ADDITIONAL INFORMATION.**

Park the machine / attachment on a flat level surface.

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

### 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 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 19.

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.



### 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 19.



#### **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



- **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



#### **AVOID BURNS**

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 19.

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 19.

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.

# Operating The Attachment

## Machine Requirements

### 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 cause attachment damage.
- DO NOT operate log splitter in vicinity of bystanders, animals, or damageable property. Objects can be thrown from the attachment.
- Never weld or modify unless pre-approved by an authorized Blue Diamond® Representative.

## Operation (Cont'd)



**DO NOT** operate log splitter when excessive wear is present. Serious damage can result. Replace parts if damaged.

### WEDGE WILL CAUSE SERIOUS INJURY OR DEATH

- Never put hands, feet or objects near the wedge while it is operating
- Keep bystanders away.
- No riders.
- Stop engine before leaving the machine servicing.



### AVOID SERIOUS INJURY OR DEATH

- Never operate the log splitter with any guards removed, including the cylinder cover.



Never allow riders on the log splitter

## Clearing Work Area



- **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 log splitter wedge.**
- **Clearly mark any objects that could cause damage that cannot be removed and avoid working near those items.**

## Initial Setup

Install the 35-ton inverted log splitter onto the machine.

Move to the operator’s position, lower seat bar, start the engine and release the parking brake.

Engage the machine’s front auxiliary hydraulics.

Position the splitter over the log you want to split

Using the machine’s auxiliary hydraulic controls, cycle the cylinder to split the log.

## ATTACHMENT SPECIFICATIONS

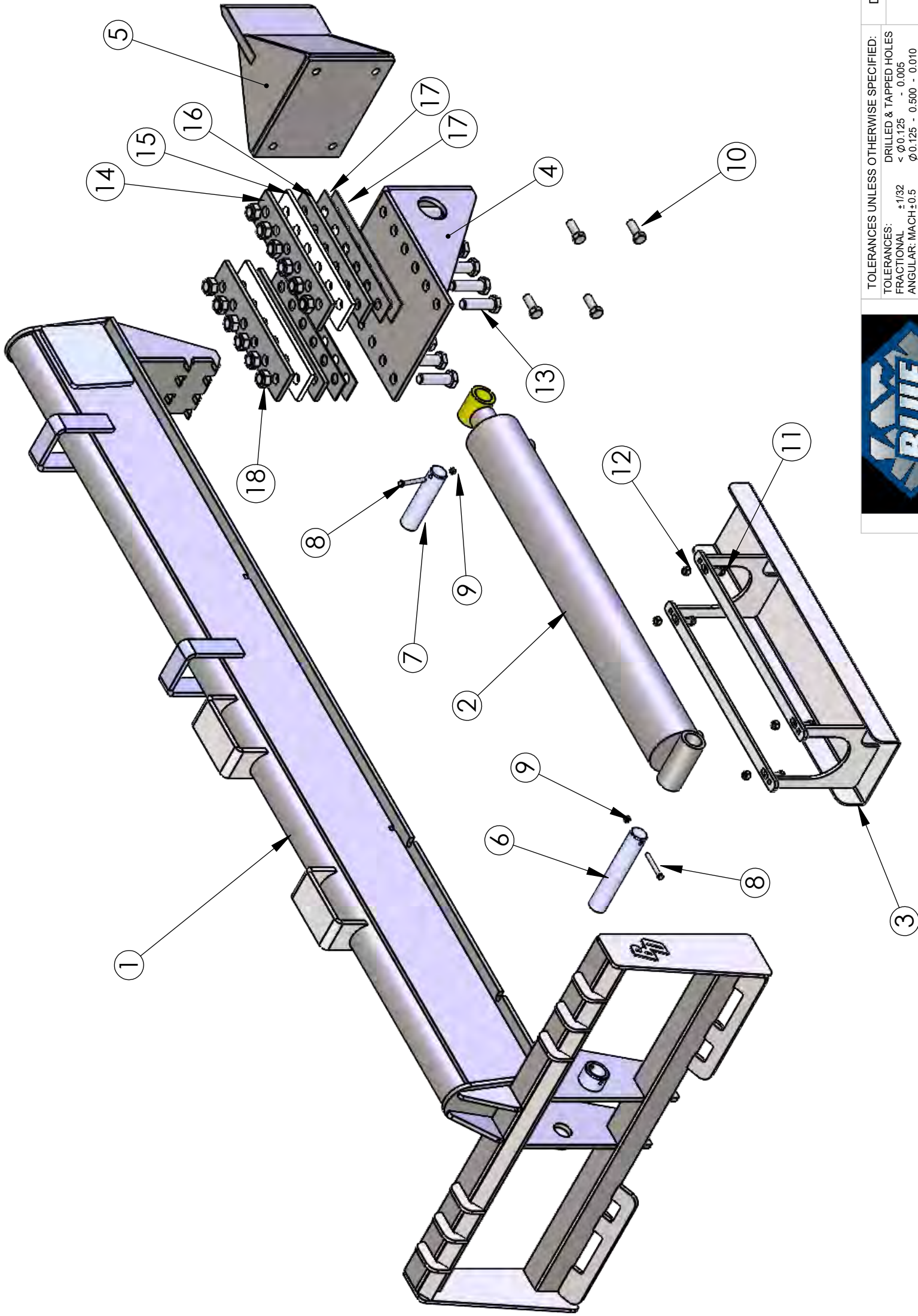
DISCRIPTION	35 TON INVERTED LOG SPLITTER
OVERALL HEIGHT	26"
OVERALL LENGTH	108"
OVERALL WIDTH	46"
MAX LOG SIZE	30"
WEIGHT (W/O WEDGE)	969 LBS
MAX PRESSURE	3,600 PSI (245 BAR)

# Service Schedule

## Maintenance Intervals

DESCRIPTION	SERVICE PROCEDURES					
	Check	Clean	Lube	Change	Adjust	Drain
<b>Daily Maintenance (or every 8 hours)</b>						
Hydraulic Fittings	•					
Hydraulic Hoses	•					
Hydraulic cylinder	•	•				
Wedge (wear, damage, and loosening)	•					
Cylinder guard	•					
All Hardware	•					
<b>Weekly Maintenance (or every 40 hours)</b>						
All Hardware	•					
Main Frame (cracks, bends, or damage)	•					
Cylinder Guard (replace missing / broken bolts)	•					
<b>Monthly Maintenance</b>						
Wedge (cracks, bends, or excessive wear)	•					
All Hardware	•					

ITEM NO.	PART	PART NUMBER	QTY.
1	Main beam assembly	250001	1
2	5" x 36" HYD cylinder	250003	1
3	Cylinder cover assembly	250004	1
4	Wedge pushing assembly	250006	1
5	Wood splitter head	250007	1
6	1.75" x 10.00" Pin	00701-07	1
7	1.75" x 7.25" Pin	250002	1
8	.375" x 3.00" Bolt	299425	2
9	.375" Nut	299625	2
10	.750" x 2.00" Bolt	299454	4
11	.500" x 1.50" Bolt	211015	4
12	.500" Nut	299618	4
13	1.000" x 3.500" Bolt	274037	12
14	Top slide (.500"x3.54"x15.5")	250015	2
15	Nylon Slide (.500"x3.54"x15.5")		2
16	Center Slide (.500"x2.50"x15.5")	2	
17	Shim slide (.125"x2.50"x15.5")	4	
18	1.000" Nut	299630	12



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TOLERANCES UNLESS OTHERWISE SPECIFIED:  
 TOLERANCES: DRILLED & TAPPED HOLES  
 FRACTIONAL ±1/32  
 ANGULAR MACH ±0.5  
 BEND ±0.5  
 0.00 ±0.01  
 0.000 ±0.005  
 0.0000 ±0.0005

THIRD ANGLE PROJECTION

CLIENT:

PRODUCT:

DESIGNED BY: DATE: DATE:  
 APPROVED BY: DATE:

MATERIAL:

FINISH:

**BLUE DIAMOND ATTACHMENTS**  
 4512 Anderson Road, KNOXVILLE, TN 37912  
 866-246-2006 / 888-376-7027  
 www.bluediamondattachments.com  
 TRADEMARK OF ATCO EQUIPMENT

TITLE:

**35 Ton Log Splitter**

SIZE DWG. NO. REV

**B**

SCALE: **1:48**

WEIGHT: SHEET:

**1 OF 1**



## **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 35 ton inverted log splitter 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 return authorization from BLUE DIAMOND ATTACHMENTS must be obtained. The failed part may then be returned. 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, LLC.



**QUALITY | DEPENDABILITY | INTEGRITY**

Blue Diamond® Attachments  
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