

## Blue Diamond

## Backhoe

# Operation and Maintenance Manual

To ensure warranty coverage please register your attachment at:  
<http://www.bluediamondattachments.com/warranty-registration/>

**Backhoe**

Publication Date: Jan 2012

# Backhoe

## Document History

The table below lists all revisions of the Backhoe Operation and Maintenance Manual.

Document Revision	Summary of Changes	Publication Date
First publication	First revision	1/1/09
	Second revision	1/1/12

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# Backhoe

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# Backhoe

## About this Manual

This manual contains information about the usage and maintenance required for the equipment. This document must be available for review by the operator before using the attachment to ensure proper safety, maintenance, and usage.

### Hazard Notices Used in this Manual

The following hazard notices are used in this document:

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

**CAUTION:** Cautions are used to indicate a potentially hazardous situation, which, if not avoided, may result in damage to the equipment or other property.

**WARNING:** Warnings are used to indicate a potentially hazardous situation, which, if not avoided, could result in serious injury or death.

**DANGER:** Danger is used to indicate a potentially hazardous situation, which, if not avoided, will result in serious injury or death.

### Terminology

**Prime Mover:** The Backhoe can be attached to many different pieces of equipment; therefore, the term “prime mover” will be used. A prime mover is any equipment, tractor, or skid steer providing power to the attachment.

## Safety

### Safety Notices

Before operating or conducting maintenance on this equipment, it is important to wear proper protection. Recommended safety equipment when operating and maintaining this equipment includes earplugs, eye protection, and a hard hat.

**NOTE:** Additional safety equipment may be required depending on the operating environment and worksite conditions.

Only qualified and trained personnel should operate, maintain, and service this attachment. Blue Diamond recommends that you inspect this equipment regularly for leaks, cracks, or other conditions that may impair proper usage of the equipment. Verify that all repairs have been completed and inspected prior to using the attachment under load.

It is the responsibility of the user to follow all local, state, and federal safety regulations. Improper use of this equipment may result in personal injury, property damage, and/or damage to the equipment.

### Modifications to Equipment

Any modifications made to this equipment may void any warranty and relieve the manufacturer of liability of any resulting injury or damage.

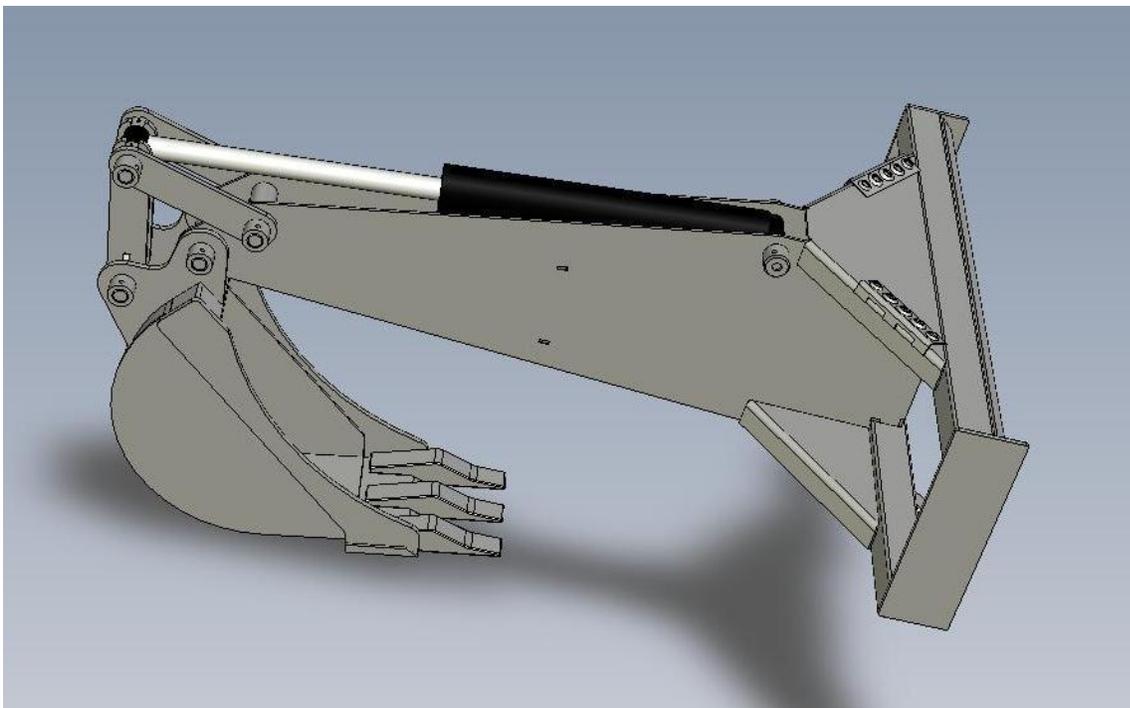
## Backhoe

### About the Backhoe Attachment

The Backhoe attachment is intended for use in trenching and digging in dirt. Use of this equipment in any other manner is considered to be contrary to the intended use of the attachment.

### Backhoe

- Very powerful 3 ½" bore 20" stroke cylinder
- I beam style boom is very strong
- Linkage geometry creates exceptional breakout force and bucket rotation
- 12", 18" and 24" buckets available
- Heavy duty #230 cast teeth (replaceable)
- Tread plates for safely entering and exiting machine
- 8' from mount plate to tip of teeth
- Weighs 550 lbs (with 12" bucket)
- Bucket capacities 12" 1.8 CF, 18" 2.7 CF, 24" 3.6 CF



## Backhoe

### Attaching the Backhoe to the Prime Mover

**NOTE:** Before attempting to attach the Backhoe to the prime mover, verify that all hydraulic couplings are compatible.

**WARNING:** Improper attachment to the prime mover may cause personal injury.

**CAUTION:** All hydraulic connections must be clean and free of debris before making any connection.

1. Place the Backhoe attachment on a level surface.
2. Position and align the prime mover to the rear of the attachment, within proximity of the front of prime mover.
3. Insert and connect the prime mover into the attachment.
4. Connect the hydraulic lines from the attachment to the prime mover.
5. Close latches (or other locking mechanism) to secure the attachment to the prime mover.
6. Using the prime mover, raise the attachment and move the attachment to ensure hydraulic lines are clear of air and operate properly.

**CAUTION:** Hydraulics should operate in an even and smooth manner. Hydraulic movement that is not even and smooth may indicate that air is in the hydraulic lines.

7. Lower the attachment to ground level.
8. Inspect that the attachment is mounted properly and securely. If the attachment does not meet this requirement, follow the instructions to remove the Backhoe and re-attach using the instructions above.

### Removing the Backhoe from the Prime Mover

**WARNING:** Improper disconnection may result personal injury or damage to the attachment and prime mover.

**CAUTION:** All hydraulic connections must be clean and free of debris before disconnection.

1. Using the prime mover, lower the attachment to the ground.
2. To prevent contamination, remove any dirt and debris from the couplings. Disconnect the hydraulic connection between the attachment and the prime mover.

**NOTE:** Hydraulic connections must be disconnected before disengaging latches to prevent damage to the prime mover or the attachment.

3. Disengage the prime mover latches (or other locking mechanism) from the attachment.
4. Move the prime mover from the attachment.

# Backhoe

## Backhoe Operation

- Wear proper safety equipment as required by working conditions and local, state, and Federal laws.
- Contact local utilities for locates before digging
- Do not move machine while digging
- Be sure machine is on stable ground
- Be cautious of those around before moving machine

**DANGER:** Keep all body parts away from the Backhoe when in use.

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

## Backhoe

### Equipment Inspection Schedule

We recommend that you inspect the equipment for damage and wear before use. Use the following list as a guideline during equipment inspection.

**WARNING:** Do not use hands to check for hydraulic leaks. Keep body parts away from leaking hydraulic lines and couplings that are under pressure.

**NOTE:** Shut off the prime mover and disengage the Backhoe before performing any maintenance.

### Daily Inspection

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

- After the Backhoe has been attached, 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. Replace as required.
- Check all hardware connections to the prime mover for damage or fatigue such as cracks or other structural flaws.
- Inspect pivot pins and pin retainers to insure they are in place
- Inspect bucket teeth for wear.

### Weekly Inspection

- Inspect boom for any signs of cracking
- Inspect quick attach area for wear

### Monthly Inspection

- Check that all bolts are tight.
- Inspect buckets for wear

## Backhoe

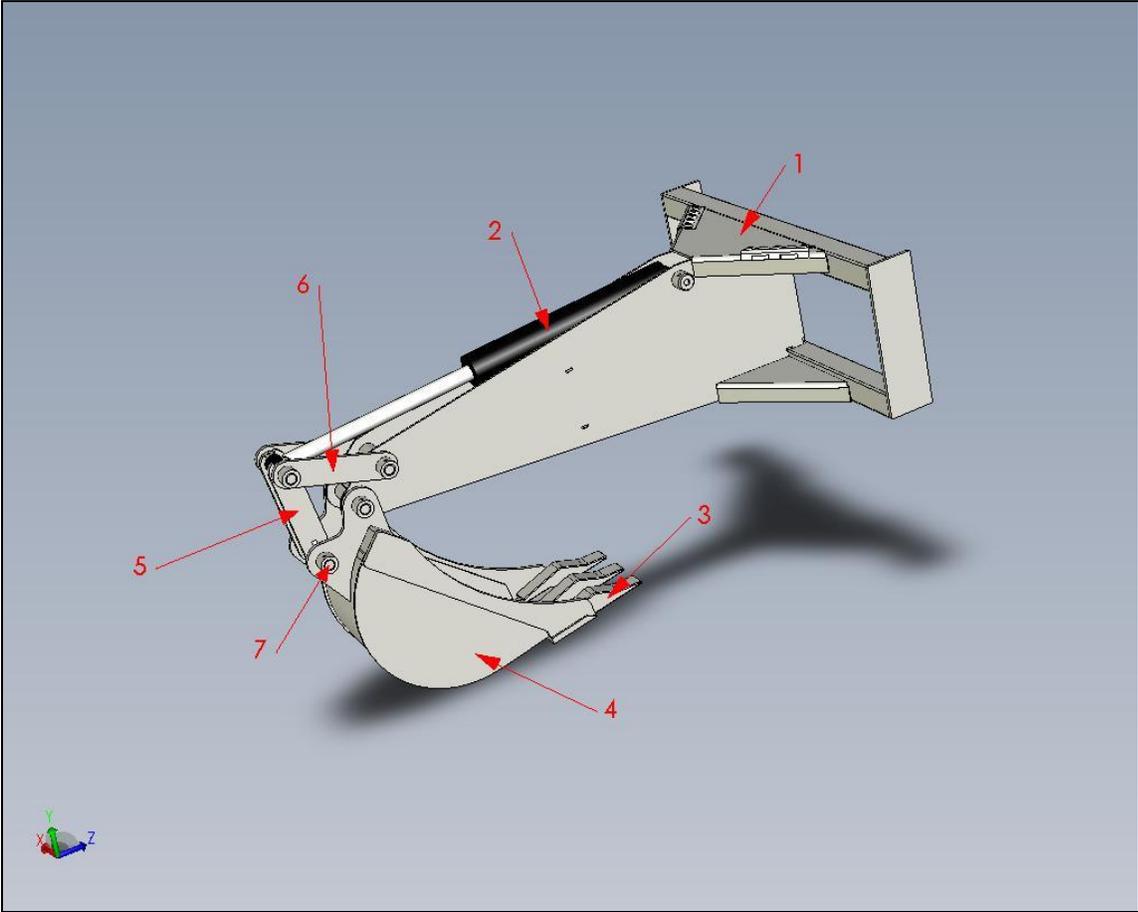
### Inspection Checklist

- Are all safety notices and warning stickers in proper locations and visible?
- Are there any visible hydraulic leaks?
- Are any cracks visible in Backhoe structure?
- Are the buckets worn, bent, or broken?
- Have all grease fittings (zerk fittings) have been greased?
- Has the prime mover been properly inspected for hydraulic leaks and proper tire inflation?
- Has the prime mover been properly maintained?

**Backhoe**

**Detailed Parts List**

**Figure 1 –Backhoe Exploded View**



## Backhoe

**Table 1 - Parts List – Extreme Duty Backhoe**

<b>Item Number</b>	<b>Description</b>	<b>Part No.</b>	<b>Qty.</b>
1	Backhoe frame	230045	1
2	cylinder	230005	1
3	Bucket teeth	210005	3
4	9"bucket	130010	1
4	12" bucket	130015	1
4	18" bucket	130020	1
4	24" bucket	130025	1
5	Cylinder to bucket link	230040	1
6	Cylinder to arm link	230030	2
7	pivot bolt	230025	4
8	Rear cylinder pin	230015	1
Not shown	Hose kit	230010	1
Not shown	female flat face coupler	224005	1
Not shown	Male flat face coupler	224006	1
Not shown	Cylinder fittings, 90 degree	230020	2

# Backhoe

## Warning Decal Placement

Figure 2 – Backhoe – Rear View

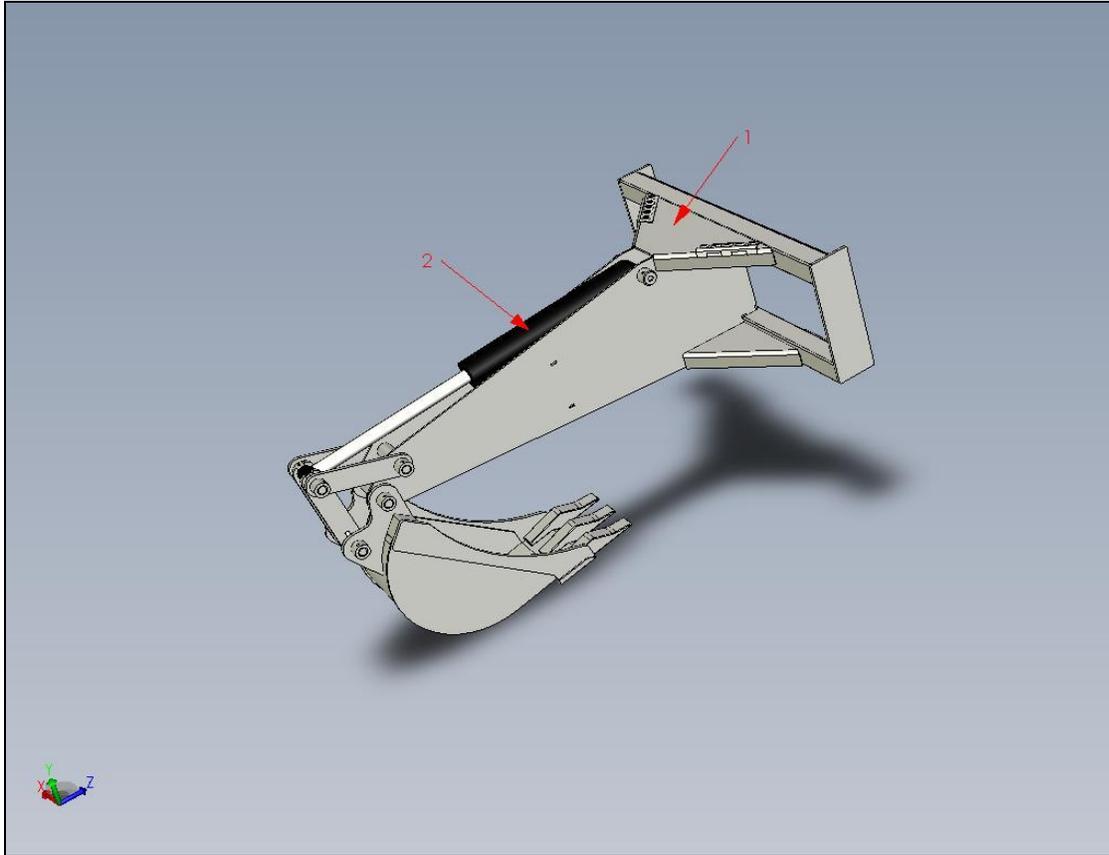


Table 2 - Parts List - Warning Decals

#	Part Name	Description	Part No.	Qty
1	Warning Decal	Read owner's manual before operating	BD-01	1
2	Warning Decal	High pressure fluid hazard	BD-02	1

Table 3 – Warning Stickers

Warning Decal 2	Warning Decal 1

## **Backhoe**

### **Manufacturer's Limited Warranty**

Blue Diamond Attachments LLC, 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 an BLUE DIAMOND designated location or at an authorized dealer location, or replacing them, as BLUE DIAMOND shall elect. The above shall be in accordance with BLUE DIAMOND warranty adjustment policies. BLUE DIAMOND Attachments obligation shall terminate twenty-four (24) months for the Extreme Backhoe and twelve (12) months for the Standard Duty Backhoe 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 LLC factory or authorized Blue Diamond Attachments LLC dealership or in any way so as in Blue Diamond Attachments LLC 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 LLC 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 LLC 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 LLC 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 LLC has any authority to bind Blue Diamond Attachments LLC 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

Backhoe

## Warranty Registration:

Please fill out this warranty registration within 30 days of the purchase of your attachment. It can be faxed to 865-246-2007 or emailed to:

[info@bluediamondattachments.com](mailto:info@bluediamondattachments.com)

Name and address \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Phone # \_\_\_\_\_

Attachment part # \_\_\_\_\_

Attachment serial # \_\_\_\_\_

Date purchased \_\_\_\_\_

Name of dealer attachment was purchased from:  
\_\_\_\_\_  
\_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
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