

# BadgerClaw Safety and Operation Manual

# BADgerClaw

The BadgerClaw Safety and Operation Manual has been designed to assist you in doing your jobs safer and more efficiently. Read this manual carefully and become familiar with its contents before operating the BadgerClaw.

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## GENERAL COMMENTS

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

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

### **WARNING!**



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

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

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

## BEFORE OPERATION

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

## SAFETY ALERT SYMBOL



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





## SERVICE



When servicing your product, remember to use only manufacturer replacement parts. Substitute parts may not meet the standards required for safe, dependable operation. To facilitate parts ordering, record the model and serial number of your unit in the space provided on the cover of this manual. This information may be obtained from the identification plate located on the product. The parts department needs this information to insure that you receive the correct parts for your specific model.



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

	<b>DANGER</b>	THIS SIGNAL WORD IS USED WHERE SRIIOUS INJURY OR DEATH WILL RESULT IF THE INSTRUCTIONS ARE NOT FOLLOWED PROPERLY.
	<b>WARNING</b>	THIS SIGNAL WORD IS USED WHERE SERIOUS INJURY OR DEATH COULD RESULT IF THE INSTRUCTIONS ARE NOT FOLLOWED PROPERLY.
	<b>CAUTION</b>	THIS SIGNAL WORD IS USED WHERE SERIOUS INJURY OR DEATH COULD RESULT IF THE INSTRUCTIONS ARE NOT FOLLOWED PROPERLY.
	<b>NOTICE</b>	INDICATES A PROPERTY DAMAGE MESSAGE

## GENERAL SAFETY PERCAUTIONS

### READ MANUAL PRIOR TO INSTALLATION

#### **WARNING!**



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

### READ AND UNDERSTAND ALL SAFETY STATEMENTS

#### **WARNING!**



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

### KNOW YOUR EQUIPMENT

#### **WARNING!**



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

### PROTECT AGAINST FLYING DEBRIS

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

## LOWER OR SUPPORT RAISED EQUIPMENT

### WARNING!



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

## USE CARE WITH HYDRAULIC FLUID PRESSURE

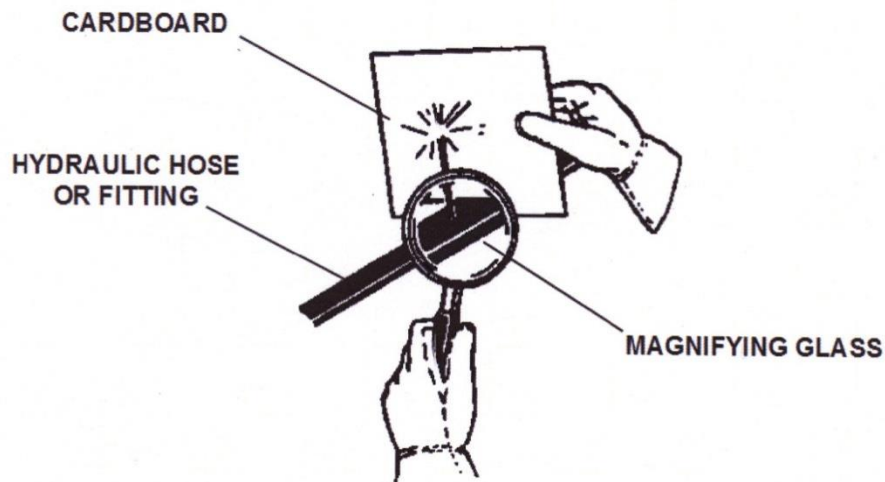
### WARNING!



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

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

**SEE ILLUSTRATIONS:**



## DO NOT MODIFY MACHINE OR ATTACHMENTS

### WARNING!



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

## SAFELY MAINTAIN AND REPAIR EQUIPMENT

### WARNING!



- Do not wear loose clothing or any accessories that can catch in moving parts. If you have long hair, cover or secure it so that it does not become entangled in the equipment.

- Work on level surface in a well-lit area.
- Use properly grounded electrical outlets and tools
- Use the correct tools for the job at hand. Make sure they are in good conditions for the task required.
- Wear the protective equipment specified by the tool manufacturer.



## **SAFELY OPERATE EQUIPMENT**

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

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

## **EQUIPMENT SAFETY PRECAUTIONS**

### **WARNING! LOCATE UTILITIES 1-800 DIG RITE**

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

## **OPERATING THE BADGERCLAW**

Do not mount this attachment onto any prime mover that exceeds 100 HP. Refer to your prime mover's manual for maximum lifting capacity.

Do not exceed the lifting capacity of your prime mover.

Operate only from the operator's station

When operating on slopes, drive up and down, not across. Avoid steep hillside operation, which could cause the prime mover to overturn.

Reduce speed when driving over rough terrain, on a slope, or turning, to avoid overturning the vehicle.

An operator must not use drugs or alcohol, which can change his or her alertness or coordination, an operator taking prescription or over-the-counter drugs should seek medical advice on whether or not he or she can safely operate equipment.

Before exiting the prime mover, lower the attachment to the ground, turn off the prime mover's engine, remove the key and apply the brakes.

Never heap load heavy material where the combined weight of the BadgerClaw and material could exceed the rated lifting capacity of the loader.

Be sure the load does not stick out too far in front of the bucket. A light load sticking out too far can have the same tipping effect as a heavy load carried in close.

When using the BadgerClaw, lift the load slightly and make sure that the load is secure. If the load appears to be unstable, lower the load, open the grapple and reposition the load to attain full stability.

## **TRANSPORTING THE BADGERCLAW**

Travel only with the BadgerClaw in a safe transport position to prevent uncontrolled movement. Drive slowly over rough ground and on slopes.

When driving on public roads use safety lights, reflectors, Slow Moving Vehicle signs etc., to prevent accidents. Check local government regulations that may affect you.

Do not drive close to ditches, excavations, etc., cave in could result.

Do not smoke when refueling the prime mover. Allow room in the gas tank for expansion. Wipe up any spilled fuel. Secure cap tightly when done.

## **MAINTAINING THE BADGERCLAW**

Before performing maintenance, lower the BadgerClaw to the ground, turn off the engine, remove the key and apply the brakes.

Never perform any work on the BadgerClaw unless you are authorized and qualified to do so. Always read the operator service manual's before any repair is made. After completing maintenance or repair, check for correct functioning of the BadgerClaw. If not functioning properly, always tag "DO NOT OPERATE" until all problems are corrected.

Worn, damaged, or illegible safety decals must be replaced. New safety decals can be ordered from Turflite, Inc.

Never make hydraulic repairs while the system is under pressure. Serious personal injury or death could result.

Never work under raised BadgerClaw.

## DECALS

### GENERAL INFORMATION

Decals for the BadgerClaw are in place for your safety. Please review the following decals and follow the safety precautions. Use this information to order replacements for lost or damaged decals. Be sure to read all decals before operating the attachment. They contain information you need to know for both safety and longevity.

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

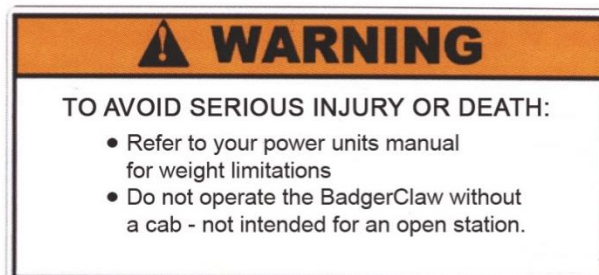
**REPLACING SAFETY SIGNS:** Clean the area of application with nonflammable solvent, then wash the same area with soap and water. Allow the surface to fully dry. Remove the backing from the safety sign, exposing the adhesive surface. Apply the safety sign and smooth out any bubbles.



DANGER! PINCH POINT



WARNING! HIGH PRESSURE FLUID



WARNING! POWER UNIT LIMITATIONS



# **GENERAL INSTALLATION AND OPERATION**

## **GENERAL INFORMATION**

The BadgerClaw is designed to be used on compact tractors and other prime movers up to 100 horsepower. Refer to your prime mover's manual for maximum lifting capacity.

Operating this attachment on a prime mover that exceeds any of these specifications will cause damage to the attachment and void the warranty.

## **HOSE & COUPLER SPECIFICATIONS**

The BadgerClaw will come with the necessary hoses and couplers. The hose is equipped with a protective sleeve that is 1 – ½" ID suction hose. The sleeve is 7 feet long to protect and secure the hydraulic hoses in a safe area on the machine. See page 15-16 for mounting instructions.

Hose Specifications:

- ¼" I.D. 5,100 PSI
- Steel braided hydraulic hose.
- Eight (8) feet long, with female #6 x 37 degree JIC fittings at each end.

Coupler Specifications:

- Standard ½" flat face male and female quick couplers with adaptors to connect to the hose.

## **INSTALLATION**

Install the BadgerClaw by following your tractor and loader operator's manual for installing an attachment.

TO AVOID SERIOUS PERSONAL INJURY, make sure the BadgerClaw is securely latched to the attachment mechanism of your unit. Failure to do so could result in separation of the BadgerClaw from the unit.

Install the power and return hoses to the fittings on the BadgerClaw followed by the quick couplers. Connect the hydraulic quick couplers to the auxiliary hydraulics and route the hoses in such a fashion as to prevent pinching and secure in place wherever necessary.

Start engine and slowly cycle the bucket cylinder(s) several times to purge system of air, check for proper hydraulic connection, hose routing, and hose length. NOTE: Power and return hoses must be long enough to accommodate complete rollout of the BadgerClaw.

Check the attachment for proper assembly, installation, and hydraulic leaks.

## **DETACHING**

On firm level ground, close the BadgerClaw and lower the loader arms until the attachment is on the ground.

Turn off the engine. Move the control levers back and forth to relieve pressure in the line. Disconnect couplers.

NOTE: Connect couplers together or install caps to prevent contaminants from entering the hydraulic system.

Follow your tractor and loader operator's manual for detaching (removing) an attachment.

NOTE: Daily lubrication of grease settings at the end of the cylinder(s) and pivot points with a multi-purpose grease will greatly increase life of the product.

## **OPERATION**

Most scrap and brush grapple buckets are designed to pick up bulky, unusually shaped, or long materials that would not stay in an ordinary bucket.

1. Approach the load in such a fashion that the weight will be centered on the floor of the BadgerClaw. The heaviest side should be closest to the back of the BadgerClaw and not near the BadgerClaw edge.
2. Before lifting, make certain the BadgerClaw is completely under the load and the BadgerClaw floor is level.
3. Close the claws to their fullest extent possible and lift the BadgerClaw slightly to be certain that the load is secure.

NOTE: If the load appears to be unstable, lower the BadgerClaw to the ground, open the grapples and reposition the load to attain full stability. Repeat until full stability is achieved.

## **STORAGE**

1. Clean the unit thoroughly, removing all mud, dirt, and grease.
2. Inspect for visible signs of wear, breakage, or damage. Order any parts required and make the necessary repairs to avoid delays when starting next season.
3. Tighten loose nuts, cap screws, and hydraulic connections.
4. Cap hydraulic couplers to protect against contaminants.
5. Touch up all unpainted surfaces with paint, to prevent rust.
6. Coat the exposed portions of the cylinder rods with grease.
7. Store the unit in a dry and protected place. Storing the unit outside can prematurely shorten its life.

# **MAINTENANCE & SERVICE**

## **GENERAL INFORMATION**

Regular maintenance is the key to long equipment life and safe operation. Maintenance requirements have been reduced to the absolute minimum. However, it is very important that these maintenance functions be performed as described below.

## **DAILY**

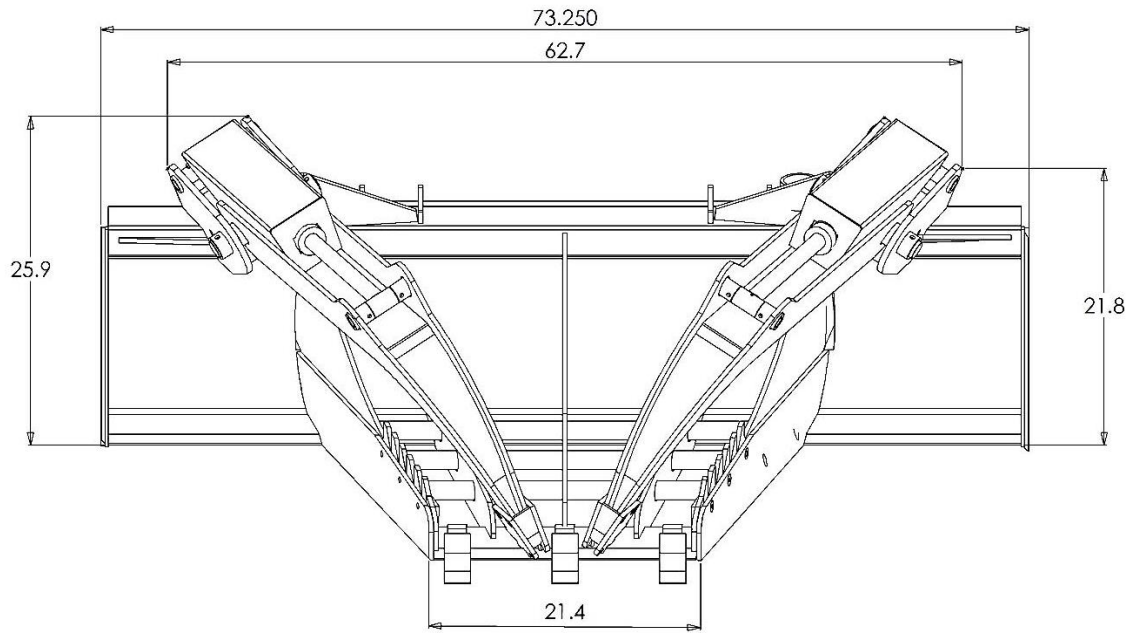
- Check all bolts and nuts for tightness.
- Replace any missing bolts or nuts with approved replacement parts.
- Check hydraulic systems for hydraulic oil leaks.
- Visually inspect the machine for worn parts or cracked welds, and repair as necessary.
- Lubricate all grease fittings

Important: When replacing parts, use only factory approved replacement parts. Manufacturer will not claim responsibility for use of unapproved parts or accessories, and/or other damages as a result of their use.

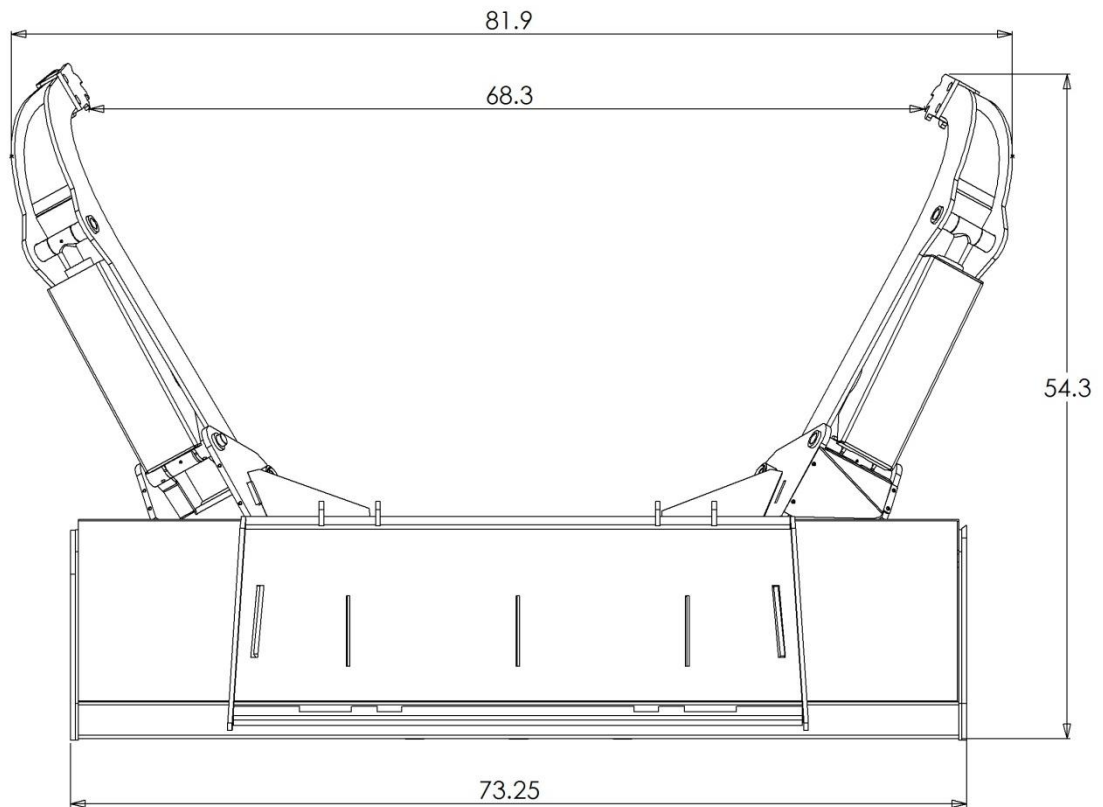
# SPECIFICATIONS

## 72" BadgerClaw

Front View

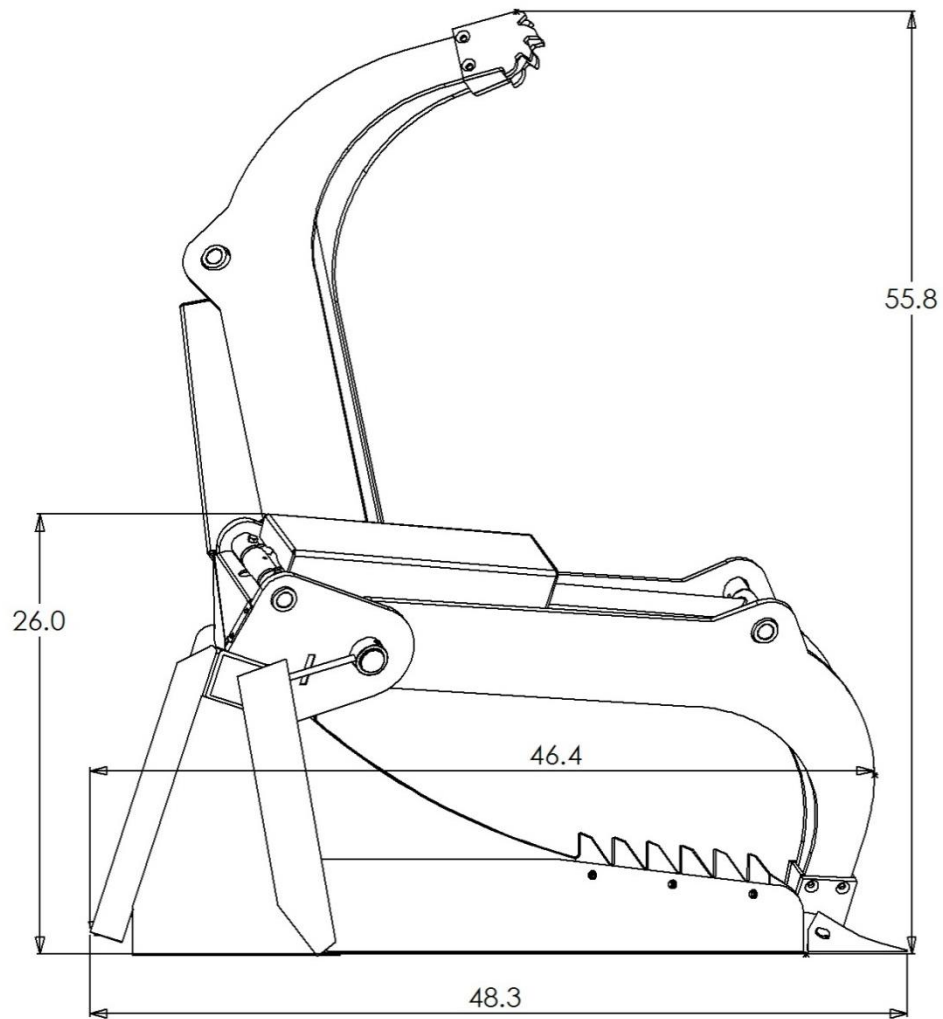


Back View



# SPECIFICATIONS

Side View



## LIMITED WARRANTY

Except the excluded products as described below, all new products are warranted to be free from defects in material and/or workmanship during the warranty period, in accordance with and subject to the terms and conditions of this Limited Warranty.

1. **Excluded Products:** The following are excluded from this Limited Warranty:
  - a. Any part that engages with the ground, hydraulic hoses, hydraulic fittings, grader teeth, jaw teeth, blade cutting edge, pins, bushings, and grease zerks.
  - b. Any product, merchandise or component that, in the opinion of Turflite, Inc. has been (i) misused (ii) modified in any unauthorized manner, (iii) altered, (iv) damaged, (v) involved in an accident, or (vi) repaired using parts not obtained through Turflite, Inc.
2. **Warranty Period:** The Limited Warranty is provided only to those defects that occur during the Warranty Period, which is the period that begins on the first to occur of: (i) the date of initial purchase by an end-user, (ii) the date the product is first leased or rented, or (iii) the date that is six months after the date of shipment by Turflite, Inc. as evidenced by the invoiced shipment date and ends on the date (the commencement date) that is twenty-four (24) months after the commencement date.
3. **Terms and Conditions of Limited Warranty:** The following terms and conditions apply to the limited warranty hereby provided:
  - a. **Option to Repair or Replace:** Turflite, Inc. shall have the option to repair or replace the product.
  - b. **Timely Repair Notice:** In order to obtain. The limited warranty (i) the product must be repaired within thirty (30) days from the date of failure, and (ii) a claim under the warranty must be submitted to Turflite, Inc. in writing within thirty (30) days from the date of repair.
  - c. **Return of Defective Part or Product:** If requested by Turflite, Inc. the alleged defective part or product shall be shipped to Turflite, Inc. at its manufacturing facility or other location specified by Turflite, Inc., with freight PRE-PAID by the claimant, to allow Turflite, Inc. to inspect the part or product.

Claims that fail to comply with the above terms and conditions shall be denied.

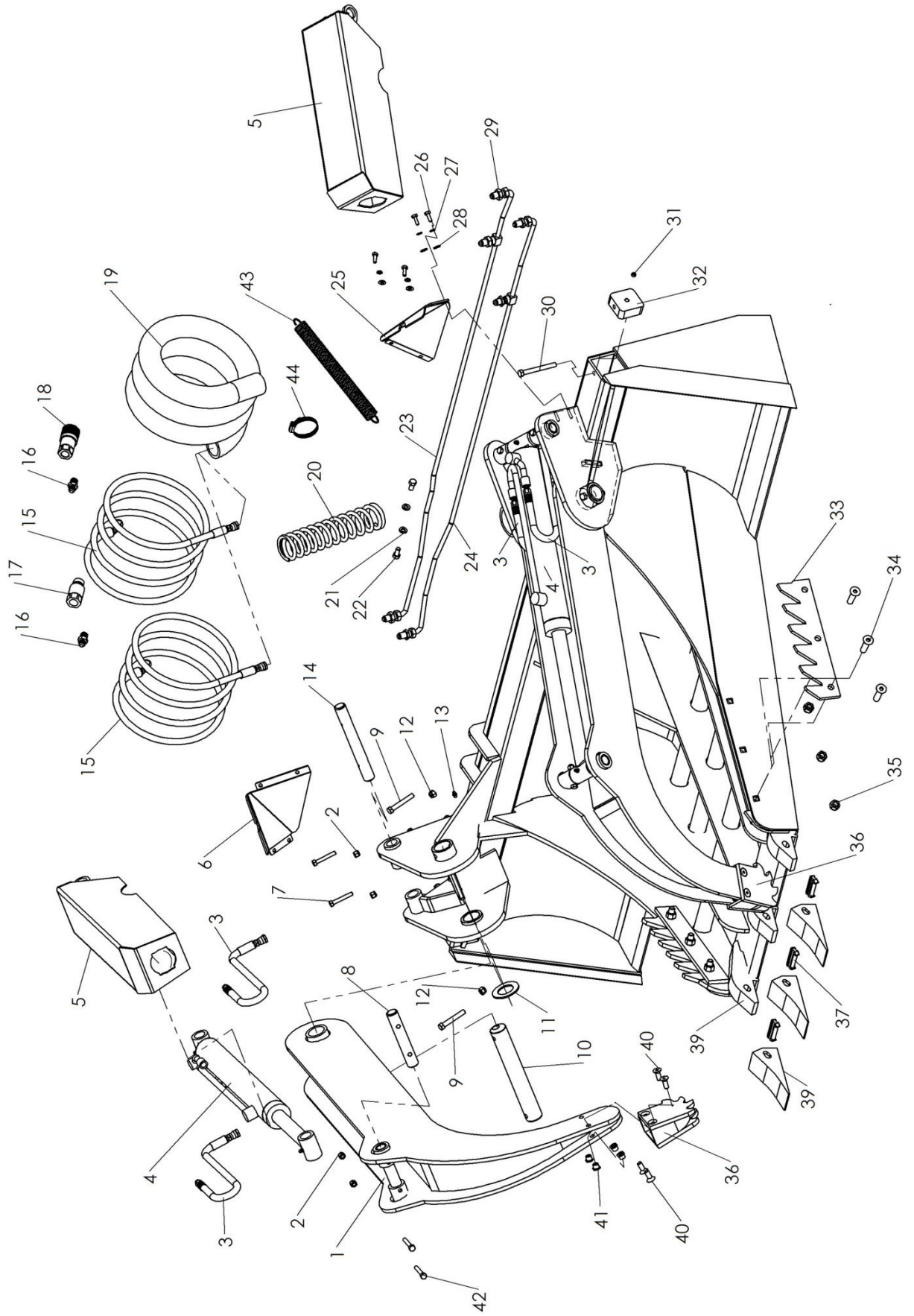
## LIMITATIONS AND EXCLUSIONS

THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND ANY WARRANTY BASED ON A COURSE OF DEALING OR USAGE OF TRADE.

IN NO EVENT SHALL TURFLITE, INC. BE LIABLE FOR CONSEQUENTIAL OR SPECIAL DAMAGES.

IN NO EVENT SHALL TURFLITE, INC. BE LIABLE FOR ANY LOSS OR CLAIM IN AN AMOUNT IN EXCESS OF THE PURCHASE PRICE, OR, AT THE OPTION OF TURFLITE, INC. THE REPAIR OR REPLACEMENT OF THE PARTICULAR PRODUCTS ON WHICH ANY CLAIM OF LOSS OR DAMAGE IS BASED. THIS LIMITATION OF LIABILITY APPLIES IRRESPECTIVE OF WHETHER THE CLAIM IS BASED ON BREACH OF CONTRACT, BREACH OF WARRANTY, NEGLIGENCE OR OTHER CAUSE AND WHETHER THE ALLEGED DEFECT IS DISCOVERABLE OR LATENT.

# BadgerClaw Bucket Schematic



Item #	Dept #	Part #	Description	Qty
1	01A	BC-10	Claw Assembly	2
2	H	H-3179	5/16 - 18 Nylon Lock Nut	8
3	01P	BC-55	Cylidner Hoses	4
4	01P	BC-27	Hydraulic Cylinder	2
5	01P	BC-43-1	Cylinder Cover	2
6	01P	BC-49R	Hose Cover Plate Right Side	1
7	H	2503	5/16 - 18 x 2" Gr 5 Hex	4
8	01A	BC-38	Cylinder Pin Mount	2
9	H	1050	3/8 - 16 x 2 1/2 Gr 5 Hex	4
10	01A	BC-29	Claw Hinge Pin	2
11	01P	BC-71	Thrust Washer	2
12	H	1180	3/8 - 16 Nylon Lock Nut	4
13	H	1681	1/4 - 28 Grease Zerk	6
14	01A	BC-25	Cylinder Base Pin	2
15	01P	BC-56	Feed Hose 1/4" Hydraulic	2
16	01P	BC-59	Hydraulic Adaptor for Coupler	2
17	01P	BC-57	Hydraulic Plug - Flat Face Male	1
18	01P	BC-58	Hydraulic Coupler - Flat Face Female	1
19	01P	BC-61	Feed Hose Protective Sleeve	1
20	01P	BC-53	Feed Hose Support Spring	1
21	H	1010	3/8 Split Lock Washer	2
22	H	17	3/8 - 16 x 3/4 Gr 5 Hex Bolt	2
23	01P	BC-50B	53' Manifold Tube Rear -Only Used for serial numbers ending in 3-13	1
23	01P	BC-50D	54 "Manifold Tube Rear	1
24	01P	BC-50A	53 "Manifold Tube Forward -Only Used for serial numbers ending in 3-13	1
24	01P	BC-50C	54" Manifold Tube Forward	1
25	01P	BC-49L	Hose Cover Plate Left Side	1
26	H	1003	1/4 - 20 x 3/4 Gr. 5 Hex	8
27	H	1007	1/4 Split Lock Washer	8
28	H	1008	1/4 USS Flat Washer	8
29	n/a	n/a	9/16 - 18 Lock Nut - Supplied with Manifold	6
30	H	3187	3/8 - 16 x 4" Gr. 5 Hex Bolt	2
31	H	V8002	3/8 - 16 x 1/4 - Flat Point Set Screw	2
32	01P	BC-68	Frame Plug	2
33	01P	BC-18	Replaceable Teeth	2
34	H	18	1/2 - 13 x 2 Flat Head Sock Cap Screw	6
35	H	1073	1/2 - 13 Nylon Lock Nut	6
36	01A	BC-70	Claw Tip Assembly	2
37	01P	BC-31A	Tooth Tip Retaining Pin	3
38	01P	BC-31	Replaceable Tooth Tip	3
39	01P	BC-30	Weld on Tooth Shank	3
40	H	6105	3/8 - 16 x 1" Flat Head Socket Cap Screw	8
41	01P	BC-85	3/8 - 16 Tapered Nut	8
42	H	2503	5/16 - 18 x 2 Gr. 5 Hex	4
43	01P	BC-62	Feed Hose Carrier Spring	1



## BADGERCLAW SET-UP & OPERATION

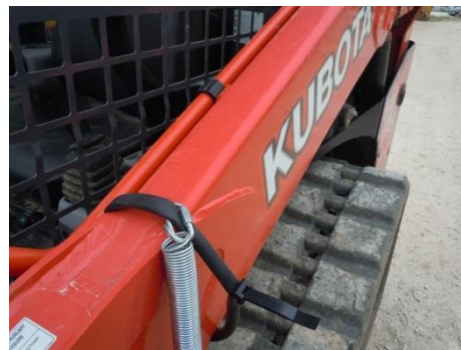
The BadgerClaw requires no set up. All hoses are fully connected and all 6 lubrication points have been pre-greased. The BadgerClaw attaches to your skid steer or tractor using the quick attach standard SAE J2513. The SAE JD2513 also known as the bobcat skid steer quick attach has become a common standard for other tractors and implement manufacturers. **Note: When attaching the BadgerClaw always latch the locking pins.**

### Hydraulic Hose Installation/Protection

There are many different styles of loaders and tractors available on the market; each one should be analyzed independently for maximum protection of your hydraulic hoses during operation. The application or use of the attachment can also dictate how to properly secure your hoses to maximize their life – saving you time and money. Please take time to look into your specific machine and application to analyze the best method suitable to secure your specific hydraulic hoses. The following are 2 options provided by Turflite, Inc. as a starting point to customize for your specific needs.

#### Standard Option

The standard option uses a protective sleeve that covers the two hydraulic hoses from the attachment to the machine. That sleeve is then secured with a clamp, 2 connector links, an extension spring, and a 400 lb. load rated adjustable strap. The pictures below show some suggestions on how this is accomplished on a few different machines. Again, take a few minutes to analyze the full travel of your equipment and install accordingly. You want the hoses safely away from the tracks or tires when the attachment is fully retracted, and not stressing the connections or overextending the spring when maximum travel is reached. We have found that looping the hose one time and then strapping back to the boom has proven most beneficial for us.







### **Retractable Hose Reel Option**

For maximum protection, we offer a retractable hose reel. The retractable hose reel is an upgraded option that attaches the reel directly to the BadgerClaw, providing maximum protection to the hydraulic hoses by limiting their exposure during operation. The pictures below show the position and protection that the reel provides. If you would like to include this upgraded feature, please ask your sales representative for a price quote. We are also actively testing the possibility of mounting the retractable hose reel directly to the machine, so that it can protect all of your attachment needs. Due to variances from machine to machine, the mounting must be custom to each. If you are interested in protecting all your attachments with the retractable hose reel, talk to your sales representative and ask for a quote today!



If the operation of the claws appear opposite of your controls; turn off the machine and simply disconnect the couplers from the hoses via the flared nuts and re-attach them to the opposite couplers. Start, operate, and check for leaks.

## **SAFETY NOTES**

Review and always comply with the limits of your machine manufacturer's specifications, taking extra caution pertaining to maximum lift capacities and operation.

Enclosed cab machines provide the most safety during operation. Tree limbs and roots under stress have the potential to snap unpredictably, and the whip effect of these limbs or roots can be dangerous.

Keep all personnel at a safe distance from the machine, and the work area. This includes the entire zone where any objects/debris could potentially fall or injure someone.

In extremely overgrown areas, try to work with the left side of your machine in the less tangled environment. The BadgerClaw hydraulic hoses are vulnerable; attention to their position and entanglement needs to be considered.

Never transport personnel on the BadgerClaw.

When closing the claws to grab or transport loads; be sure to allow the hydraulics to fully pressurize on both claws. Due to the design of the open parallel loop and semi-independent working of the claws, irregular shaped loads can be handled quite safely, as long as both claws are allowed to close as far as possible or necessary to share the load equally.

In park position, lower the unit fully to the ground, close the claws, and turn off the machine before exiting the operator's position.

## **OPERATION**

The BadgerClaw has 6 zerks that we recommend to grease every 8 hours of use:

2 Cylinder Pins (BC-38 Ref. # 8), 2 Claw Hinge Pins (BC-29 Ref. #10), and 2 Cylinder Base Pins (BC-25 Ref. # 14).

For operator safety, check the condition of hoses, fittings, pivot pins, and retaining bolts for any abnormal wear, stress points, cracks, or leaks daily. Repair and or replace worn/damaged components as necessary. A busted hose, damaged fitting, or lost/ broken pin can be dangerous due to the high fluid pressure spray as well as the potential of losing control of the load being handled.

For general grading and smoothing, the BadgerClaw features a unique forward tip and trapezoid shape that creates multiple contacts with the soil, reducing the force required to shave and move dirt verses a continual width cutting edge. The narrow forward tip with the teeth allows penetration into hard soils as the trapezoid shape is forced into this path. It then splits the soil towards the sides, which is collected and carried with the unit by the box style rear section.

The grader blade and moldboard allow the carrying of material while in contact with the ground; continually rolling it to disperse in lower areas as well as providing a full width path for the traction machine to follow in.

When cleaning and clearing an area, the open grid bottom of the bucket allows the collection of foreign materials such as limbs, rocks, and root sections that can be carried and discarded out of the area without the operator leaving his position. This feature also allows large clumps of soil (clods) to tumble and fall through, and eventually be crushed by the following of the grader section of the bucket.

For tree removal, it is recommended that you familiarize yourself with tree types, and their root structure, and to be aware of the soil type and condition of your workplace.

Tree root structure varies from deep central tap roots (i.e. hickory) to long reaching surface roots found in willow, cedar, ash and others. Knowledge of this will help you be more productive, and safer in your operation.

On most tree approaches, keep the claws open, and the bucket angled downward at 30 – 45 degrees. Small trees (less than 4" diameter) can most likely be removed by approaching straight on and pushing the bucket tip into the ground at the stated angle about 18 inches ahead of the stump. Usually up to 12" depth is all that is required to push the tip past the trunk line opposite the operator and roll/lift the tree out of the ground. At this point, the claws can be used to grab the root section and lift shaking a few feet above the ground to free loose dirt to fill the hole.

On larger trees, a pass similar to the one above may be necessary on either side of a tree to cut roots loose. Then a series of pushes under the tree, while lifting and backing away, allow the teeth on the side plates to cut through roots. Lastly, raising the bucket 6 to eight feet above the ground proceed to push the tree over. If the tree does not yield with significant force, try to pay attention to the soil area around the tree. You should notice areas around the tree where roots are heaving the soil upwards, in this case, go back and plunge under these roots until you can push the tree over. Be CAREFUL here, as you will not know exactly the size of the root ball that will be rolled up. It is easy to get entangled at this point since your bucket is above this zone, and your machine will be very close to the roots when this occurs. Maintain your focus on the ground and what is coming up from below while also being aware of where BadgerClaw is and the tree.

With the tree safely on the ground, stab into the root ball and lock it into the bucket with the claws. If machine is capable, pick up slightly and shake as much dirt as possible into the hole. The more dirt that can be shook from the roots, the better. This will lighten the tree/root area for easier transport as well as allowing for faster decomposing/ burning.

We are confident that the BadgerClaw will prove to be unique and efficient tool for removing unwanted trees, reclaiming overgrown pastures, clearing and reconstructing fence rows and drainage ditch areas in a variety of pasture, field and roadside applications.

The BadgerClaw is not limited to the uses describe in this manual: moving fresh or deteriorating large round hale bales, demolishing small structures, cleaning up after severe storms, or building demolitions are just a few. The use of the BadgerClaw is limited only by your imagination.