OWNER'S MANUAL

PATRIOT
EQUIPMENT

Bale Caddie
&
Bale Grabber

Table of Contents

Introduction

The purpose of this manual is to explain the operation and maintenance of the Bale Caddie and/or the Bale Grabber. It also contains parts list for reference, if replacement parts are needed.

Patriot Equipment recommends that you read this manual in its entirety for the information available in order to provide the proper care and maintenance of the Bale Caddie 1243 and/or Bale Grabber. The Equipment is built to provide many years of dependable service when used properly. Reading this manual will also provide information on how to use the equipment correctly to prevent any accidents while using the system.

If you have any further questions, comments, improvements or suggestions regarding the contents of the manual provided, please contact:

Patriot Equipment
PO Box 356
1302 K Rd
Minden, NE 68959
1-800-264-6587

ALL safety decals are no charge from the factory. Please replace all safety decals if damaged or missing. Your safety is important to us.

General Safety Statements

Safety precautions are essential when the use of any mechanical equipment is involved. These precautions are necessary when using, storing, and servicing mechanical equipment. Using this equipment with the respect and caution demanded will considerably lessen the possibilities of personal injury. If safety precautions are overlooked or ignored, personal injury or property damage may occur.

The machine was designed for a specific application. It should not be modified and/or used for any application other than which it was designed. If there are any questions regarding its application, please write or call. Do not use this unit until you have been advised. For more information, call 1-800-264-6587.

Read this entire manual carefully. Know your equipment. Consider the application, limitations, and the potential hazards specific to your unit. Occupational safety is of prime concern to us. This manual was written with the safety of the operator and others who come in contact with the equipment. This manual was written to help you understand the safe operating procedures of the Bale Caddie and/or Bale Grabber. We want you as our partner in safety. A copy of this manual should be available to all persons who may operate this machine.

It is your responsibility as an owner, operator, or supervisor to know what specific requirements, precautions, and work hazards exist and to make these known to all other personnel working with the equipment or in the area, so that they too may take any necessary safety precautions that may be required. Avoid any alterations of the equipment. Such alterations may create a dangerous situation where serious injury or death may occur and will void warranty.

Why is SAFETY important? Three reasons:

1. Accidents disable and kill
2. Accidents cost money
3. Accidents can be avoided

Operator Qualifications

Operation of the Bale Caddie and/or Bale Grabber shall be limited to competent and experienced persons. In addition anyone who will operate or work around a Bale Caddie and/or Bale Grabber must use good common sense. In order to be qualified, they must also know and meet all other requirements, such as:

1. Some regulations specify that no one under the age of 18 may operate power machinery. This may include the Bale Caddie and/or Bale Grabber. It is your responsibility to know what these regulations are in your own area or situation.
2. Current Occupational Safety Health Administration regulations state in part: "At the time of initial assignment and at least annually thereafter, the employer shall instruct every employee or user in the safe operation and servicing of all equipment with which the employee or user is, or will be involved."
3. Unqualified persons are to stay out of the work area.
4. A person who has not read and understood all operating and safety instruction is not qualified to operate the machine.

Safety Overview

YOU are responsible for SAFE operation and maintenance of your Bale Caddie and/or Bale Grabber. YOU must ensure that you and anyone who is going to operate and maintain or work around the Bale Caddie and/or Bale Grabber must be familiar with the operating, maintenance, and safety information contained in the manual.

Remember YOU are the key to safety. GOOD PRACTICES protect not only you but also the people around you. Make these practices a working part of your safety program. Be certain EVERYONE operating this

machine is familiar with the procedures recommended and follows safety precautions. Remember, most accidents can be prevented. Do not risk injury or death by ignoring any information addressed.

Bale Caddie and/or Bale Grabber owners must give operating instructions to operators before allowing them to operate the Bale Caddie and/or Bale Grabber. They must be reviewed at least annually thereafter per OSHA regulation 1928.57.

The most important safety device on the equipment is a SAFE OPERATOR. It is the operator's responsibility to read and understand ALL instructions in the manual and to follow them. All accidents can be avoided!

Any person who has not read and understood all operation and safety instructions is not qualified to operate the Bale Caddie and/or Bale Grabber. An untrained operator exposes himself and bystanders to possible serious injury or death.

Do not modify the equipment in any way. Unauthorized modifications may impair the functions and/or safety and could affect the life of the equipment.

Safety Affirmation

1. I have read and understand the operator's manual and all safety signs before operation, maintenance, adjusting, or unplugging the Bale Caddie and/or Bale Grabber.
2. I will allow only trained persons to operate the Bale Caddie and/or Bale Grabber. *An untrained operator is not qualified to operate this equipment.
3. I have access to a fire extinguisher.
4. I have all guards in place and will not operate the Bale Caddie and/or Bale Grabber without them.
5. I will not allow riders on the Bale Caddie and/or Bale Grabber.
6. I understand the danger of moving parts (bed dumping, hydraulics, and pinch points) and will stop the engine before servicing.
7. I recognize the danger of the Bale Caddie and/or Bale Grabber coming in contact with power lines.
8. I understand that any accidents that occur with the Bale Caddie and/or Bale Grabber are my responsibilities.
9. I understand that Patriot Equipment will not be held responsible for any accidents that involve the Bale Caddie and/or Bale Grabber.

Sign Off Sheet

(This sheet should be signed annually as part of your safety program)

As a requirement of OSHA, it is necessary for the owner/employer to train the employee in the safe operation and safety procedures with this Crop Sweeper. We include this sign off sheet for your convenience and personal record keeping.

DATE	EMPLOYER SIGNATURE	EMPLOYEE SIGNATURE

Machine Inspection

After delivery of your new Bale Caddie and/or Bale Caddie and/or completion of assembly, and before each use, inspection of the machine is mandatory. This inspection should include, but not be limited to:

1. Check to see that all guards are in place, secured and functional.
2. That all fasteners are tight.
3. That all hydraulic lines are free from leaks and defects.
4. That all electronics are working properly and wires are in good condition.

Lighting and Marking

It is the responsibility of the customer to know the lighting and marking requirements of the local highway authorities and to install and maintain the equipment to provide compliance with the regulations. Add extra lights when transporting at night or during periods of limited visibility if necessary.

Serial Number

To ensure efficient and prompt service, please furnish us with the model and serial number of your Bale Caddie and/or Bale Grabber in all correspondence or other contact. The serial number for the Bale Caddie is located on the bale chute. The serial number for the Bale Grabber is located on the connection upright on the rear of the tool.

Safety Decals

1. Keep safety decals clear and legible at all times.
2. Replace decals and signs that are missing or have become unreadable.
3. Safety signs are available from your Dealer or the Manufacturer.

How to install Safety Decals

1. Be sure that the installation area is clean and dry.
2. Decide on the exact position before you remove the backing paper.
3. Align the decal over the specified area and carefully press the small portion with the exposed sticky backing in place.
4. Slowly peal back the remaining paper and carefully smooth the remaining portion of the decal in place.
5. Small air pockets can be pierced with a pin and smoothed out using a piece of decal backing paper.

Safety Decals

BC2500

BC2505

BC2510

BC2515

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1302 K Road Minden, NE
800-264-6587 / 308-832-0220

Decals

BC2520 Rev 1

Model 1243

TS2001

TS2003

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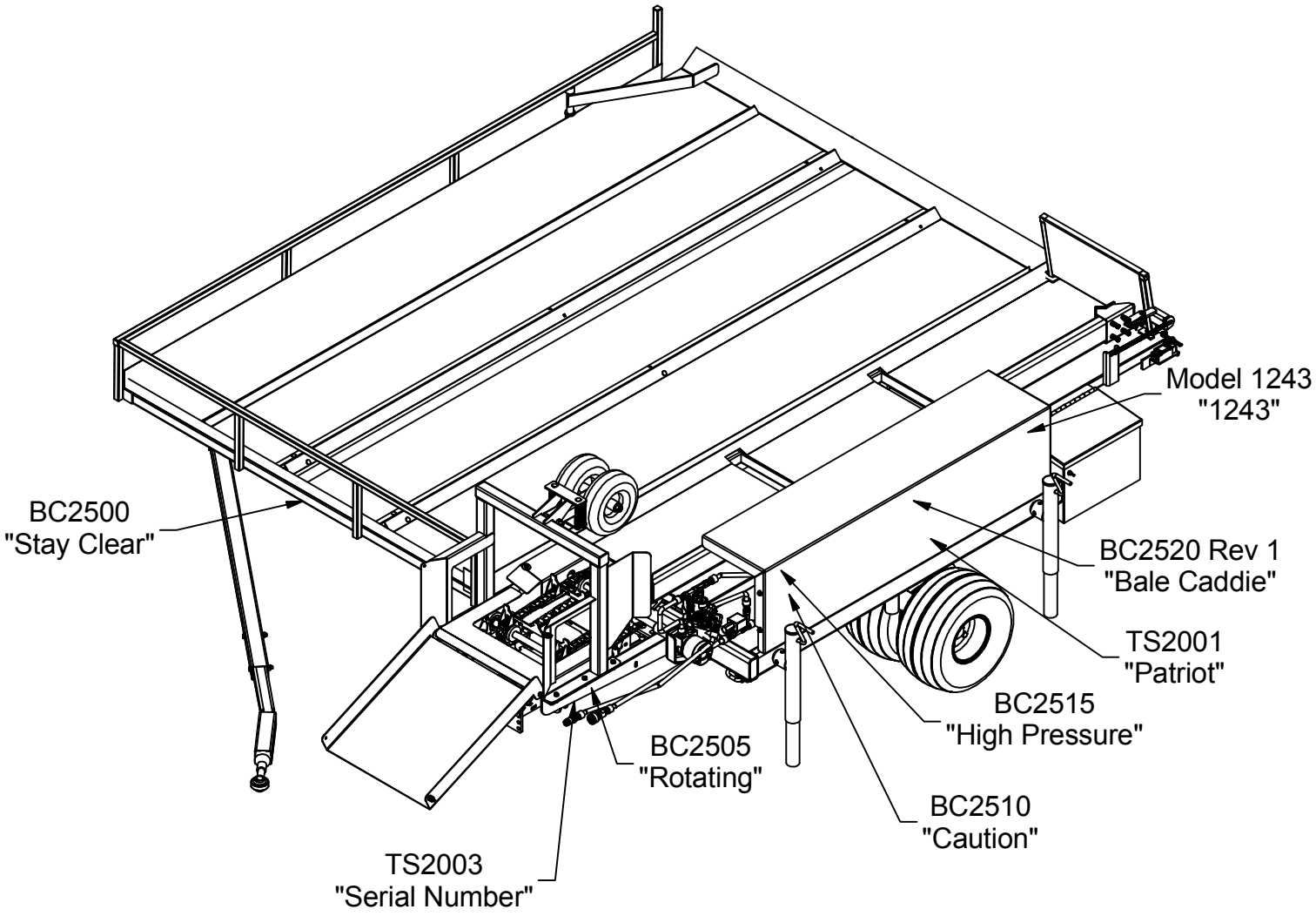
Bale Caddie Decal Locations



Please refer to previous two pages for pictures of the decals.

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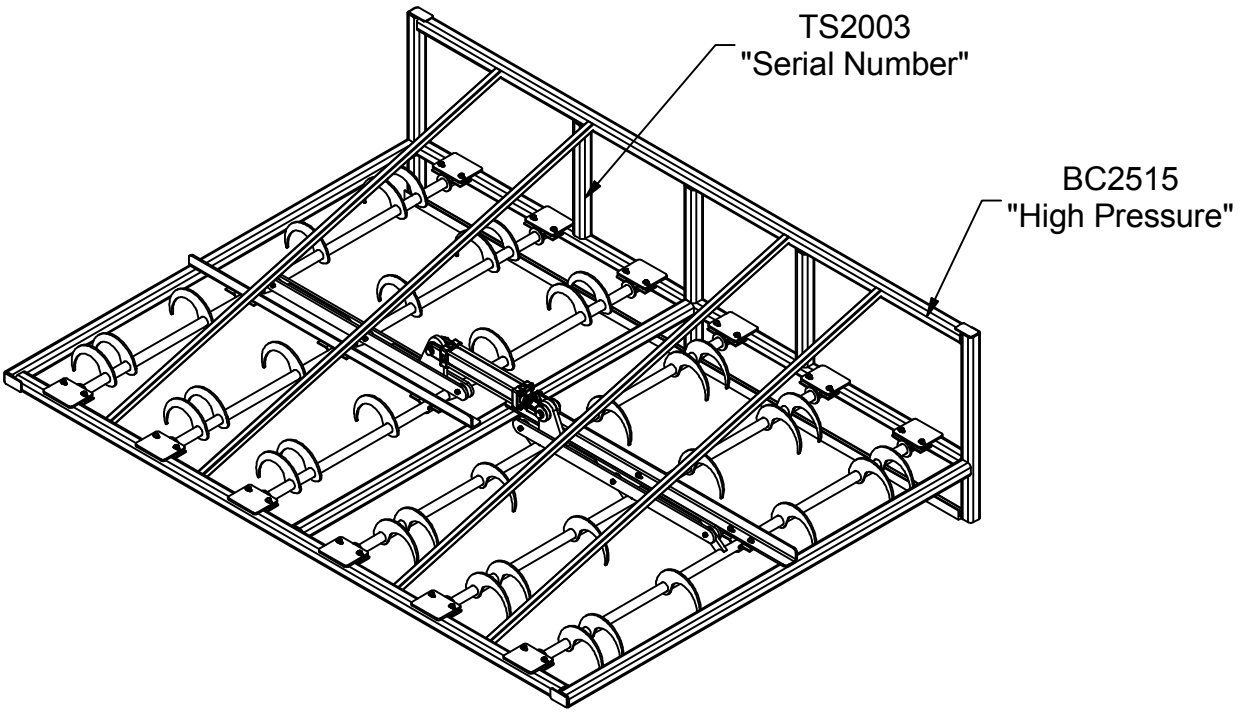
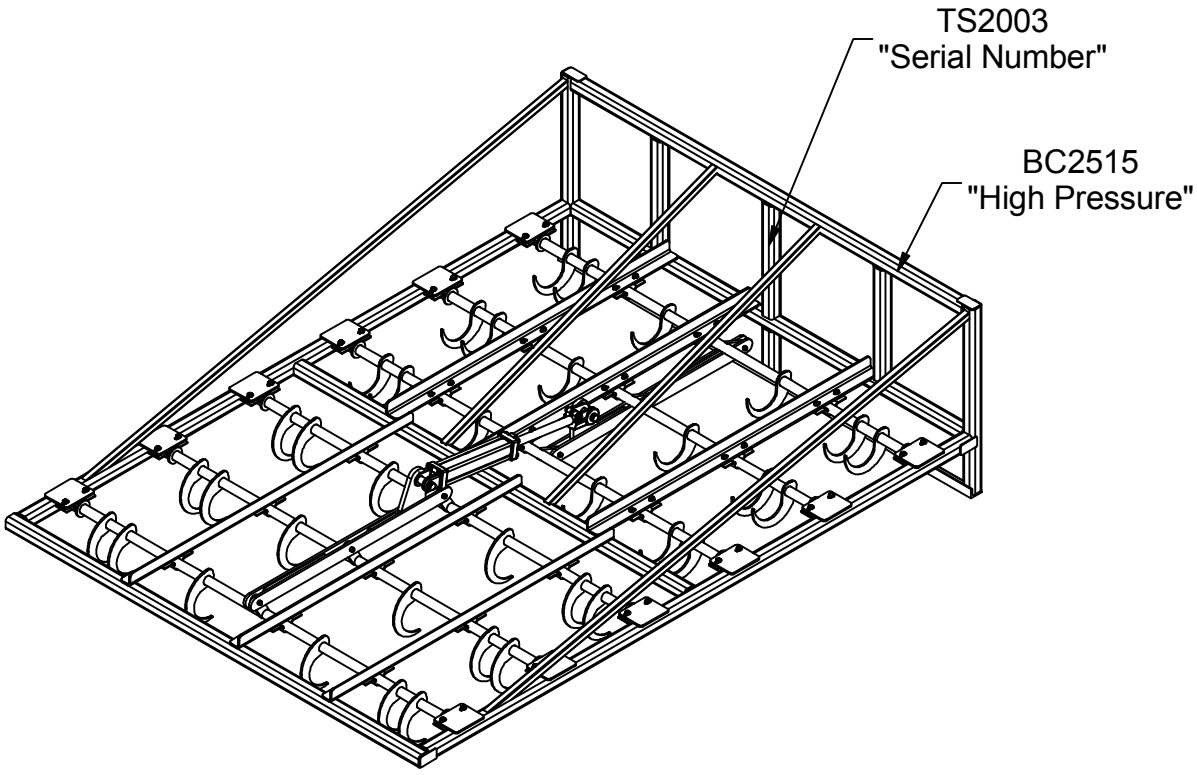
Bale Grabber Safety Decal Placment





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Safety Alert Symbols

The symbol shown below is used to call your attention to instructions concerning your personal safety. Watch for this symbol, it points out important safety precautions. It means:

ATTENTION! Become Alert! Your Personal Safety Is Involved!

Read the message that follows and be alert to the possibility of personal injury or death.

DANGER

DANGER: Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. The color associated with Danger is RED.

WARNING

WARNING: Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury. The color associated with Warning is ORANGE.

CAUTION

CAUTION: Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. The color associated with Caution is YELLOW.

WARNING! Anyone who will be operating or working around the equipment should first read this manual to familiarize themselves with the machinery safety

Safety

A careful operator is the best operator. Most accidents can be avoided by observing certain precautions. To help prevent accidents, read the following precautions before operating the equipment. The equipment should be operated only by those who are responsible and instructed to do so.

Carefully review the procedures given in this manual with all operators. It is important that all operators be familiar with and follow the safety precautions. **Improper use of the equipment can cause serious injury or death.**

Towing the Bale Caddie.

1. **DO NOT** tow the Bale Caddie behind a vehicle. It is to be towed behind a baler ONLY.
2. Ensure the Bale Caddie is properly hitched to the baler using both the tongue and stabilizer bar. Make sure all bolts and pins are secured properly.
3. Make sure the SMV sign is clean and clearly visible.
4. Refer to local, state, or provincial laws and regulations for restrictions on public roads.
5. Be cautious when turning, as the Bale Caddie is fixed to the back of the baler and will "Swing" around corners rather than follow like a normal trailer.

Operating the Bale Caddie and Bale Grabber.

1. Read the operator's manual before operating equipment.
2. Only allow properly trained persons to operate the equipment.
3. Be sure the tractor meets the minimum requirements required to operate the equipment.
4. **DO NOT** operate the equipment without all the shields in place.
5. **DO NOT** allow anyone to ride on the equipment.
6. Keep the equipment free of dust, chaff, and hay. Always have a fire extinguisher handy.
7. Double check that all retaining pins and fasteners are in place and properly tightened.

Servicing the Bale Caddie and Bale Grabber

1. **DO NOT** work around the equipment in loose clothing that might catch in any moving parts.
2. **DO NOT** clean, lubricate or adjust the equipment while it is running. Park the tractor on level ground, turn the engine off, and set the parking brake or block the wheels.
3. **DO NOT** modify or allow anyone to modify the equipment without consulting the dealer.
4. Escaping hydraulic fluid under pressure can penetrate the skin causing serious injury.
5. **DO NOT** use your hand to check for leaks. Use a piece of cardboard.

6. Inspect the hydraulic hoses regularly for signs of wear, leakage, and impending failure. Take appropriate action to prevent unexpected hydraulic failure.

7. **DO NOT** work or be under a raised bale platform or a raised bale grabber as it can crush you causing severe injury or death.

Attaching the Bale Grabber

1. Check that the Bale Grabber is mounted correctly.
2. Be sure that all the retaining pins are fully engaged and that fasteners are tight.
3. Connect the hydraulic connections
4. Check for hydraulic leaks and repair any that are found. See hydraulic warning below!
5. Test the hydraulics, if working backwards from desired performance; switch the hoses at the hydraulic connection of the tractor.
6. Test the bale grabber before heading to the field.

DANGER!

Never stand below a bale grabber that is unloaded or loaded with bales! Serious injury or death could result!

Remember:

Patriot Equipment includes all reasonable means for accident prevention except a safe and careful operator.

General Information

- Adjusting, lubricating or service should be performed on a flat level surface only.
- Lower the loader to the ground (if equipped), set the parking brake, shut off tractor engine, and relieve the pressure in the hydraulic system before adjusting, lubricating, or servicing the Bale Caddie or Bale Grabber.
- Inspect all pins and grease fittings before each use. Lubricate with heavy duty grease as indicated in this manual.
- Periodically check all bolts for looseness and re-torque if necessary.
- Before storage, be certain all hydraulic cylinders are fully collapsed so that the rod will not be exposed to the elements or damaged.
- Be certain hydraulic system remains sealed at all times to prevent contamination. Check and maintain an adequate fluid level in the tractor reservoir prior to use. Inspect all hydraulic system hoses and fittings. Replace prior to further operation if damaged.

WARNING!

Escaping hydraulic oil under pressure can penetrate the skin. Never use any part of the body to check for hydraulic leaks. Use cardboard when checking for leaks (Fig. 1). Relieve hydraulic pressure before disconnecting any hydraulic line. Failure to heed may result in serious injury or death.

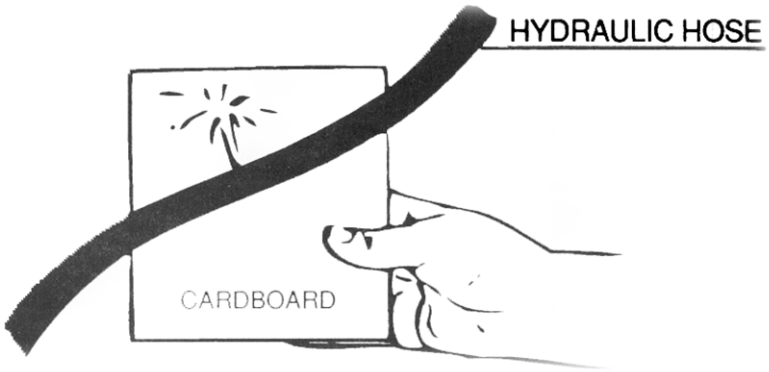

Fig. 1

Wheel Attachment and Torque Requirements

Patriot Equipment would like to reiterate the extreme importance of properly matching your axles, wheels, and tires when specifying or replacing your trailer wheels. It is of equal importance that you apply and maintain proper wheel mounting torque on your trailer axle. Please follow the wheel selection, torque requirement, and torque sequence guidelines that follow.

Wheel Selection

Wheels are a very important and critical component of your running gear system. When specifying or replacing your trailer wheels it is important that the wheels, tires, and axle are properly matched. The following characteristics are extremely important and should be thoroughly checked when replacement wheels are considered.

1. **Bolt Circle:** Many bolt circle dimensions are available and some vary by so little that it might be possible to attach an improper wheel that does not match the axle hub. Be sure to match your wheel to the axle hub, bolts circle, hub pilot and wheel mount surface to hub face. Also, confirm that proper studs stick out.
2. **Capacity:** Make sure that the wheels have enough load carrying capacity and pressure rating to match the maximum load of the axle tire and trailer.
3. **Offset:** This refers to the relationship of the center line of the tire to the hub face of the axle. Care should be taken to match any replacement wheel with the same offset wheel as originally equipped. Failure to match offset can result in reducing the load carrying capacity of your axle.
4. **Rim Contour.**

CAUTION

Replacement tires must meet the same specifications as the originals. Mismatched tires and rims may come apart with explosive force and cause personal injury to yourself and others. Mismatched tires and rims can also blow out and cause you to lose control and have an accident which can result in serious injury or death.

CAUTION

Do not attempt to repair or modify a wheel. Even minor modifications can have a great effect. Do not install a tube to correct a leak through the rim. If the rim is cracked, the air pressure in the tube may cause the pieces of the rim to explode with great force and can cause serious injury or death.

Torque Requirements

You should always consult with the wheel manufacturer to determine the appropriate torque level for your wheels. It is extremely important to apply and maintain proper wheel mounting torque on your trailer axle. Torque is a measure of the amount of tightening applied to a fastener (nut or bolt) and is expressed as length times force. For example, a force of 90 pounds applied at the end of a wrench one foot long will yield 90 Ft Lbs. of torque. Torque wrenches are the proper method to ensure torque is applied correctly to a fastener.

CAUTION

Wheel nuts or bolts must be tightened and maintained at the proper torque levels to prevent loose wheels, broken studs, and possible dangerous separation of wheels from your axle, which can lead to an accident, personal injuries or death.

Be sure to use only the fasteners matched to the cone angle of your wheel (usually 60 degrees or 90 degrees). The proper procedure for attaching your wheels is as follows:

1. Start all nuts/bolts by hand to prevent cross threading.
2. The tightening should be done in stages;
    a. Initially snug (10 ft-lb) the nuts/bolts to align and seat the wheel to the hub, in the order described in the torque sequence diagram below.
    b. Tighten the nuts/bolts performing the wheel torque sequence below.
3. Wheel nuts/bolts should be torqued before first road use and after each wheel removal. Check and re-torque after the first 10 miles, 25 miles and again at 50 miles. Check periodically thereafter, THIS IS VERY IMPORTANT.
4. Wheel nuts are designed to have full thread engagement with the wheel stud. Wheel stud threads should be visible outside the wheel nut. There will be varying amounts of thread stick out depending on variables such as center disc thickness and nut thickness. In general, there should be approximately three threads visible past the end of the nut.

Wheel Attachment and Torque Requirements

Wheel Installation Torque Sequence (Ft. Lbs.)					
Wheel Size	Stud Size	1st Stage	2nd Stage	Final Torque	Cone Nut Degree
12" - 440 BC	1/2"-20	20-25	35-40	60-75	60 Degree Cone Nut
12" - 545 BC	1/2"-20	20-25	35-40	60-75	60 Degree Cone Nut
13" - 440 BC	1/2"-20	20-25	35-40	60-75	60 Degree Cone Nut
13" - 545 BC	1/2"-20	20-25	35-40	60-75	60 Degree Cone Nut
14" - 545 BC	1/2"-20	20-25	50-60	100-120	60 Degree Cone Nut
15" - 545 BC	1/2"-20	20-25	50-60	100-120	60 Degree Cone Nut
15" - 655 BC	1/2"-20	20-25	50-60	100-120	60 Degree Cone Nut
16" - 655 BC	1/2"-20	20-25	50-60	100-120	60 Degree Cone Nut
16" - 865 BC	9/16"-18	20-25	50-60	140-170	60 Degree Cone Nut
16.5" - 655 BC	1/2"-20	20-25	50-60	100-120	60 Degree Cone Nut
16.5" - 865 BC	9/16"-18	20-25	50-60	140-170	60 Degree Cone Nut
16.5" x 9.75" 865 BC	5/8"-18	50-60	120-125	175-225	Special Stud Piloted with 90 degree Cone Nuts
17.5" Hub Pilot 865 BC	5/8"-18	50-60	100-120	190-210	Hub piloted with clamp ring. 90 degree cone nuts and greased threads.
17.5" Hub Pilot 865 BC	5/8"-18	50-60	90-200	275-325	Hub piloted with flange nut
17.5" Hub Pilot 865 BC	5/8"-18	50-60	60-110	150-175	Hub piloted with swivel flange nut

Medium and Heavy Duty Torque Requirements (Ft. Lbs.)				
Description	Part Number	Application	Torque Min. Ft. Lbs.	Torque Max. Ft. Lbs
5/8-19 90 degree Cone	006-109-00	Clamp Ring 033-052-01	190	210 Grease Threads
3/4-10 Hex Nut	006-117-00	Demountable Rim Clamp	210	260
3/4-16 Sherical Nut	006-064-01, 02 006-069-01, 02	Single Wheel Inner Dual	450 450	500 500
1-1/8 - 16 Spherical Nut	006-070-01, 02	Outer Dual	450	500
5/8-18 Non-swiveling Flange Nut	006-058-00	Wheels	275	325
5/8-18 Swiveling Flange Nut	006-209-00	Wheels	150	175
M22-1.5	006-118-00	Swiveling Flange Nut	450	500

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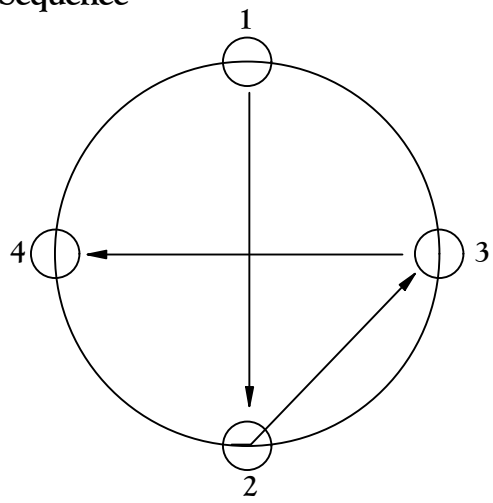
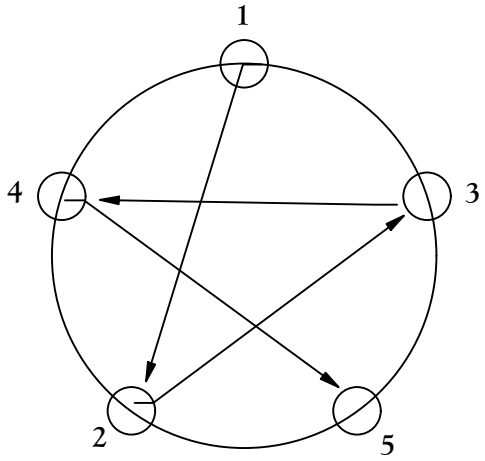
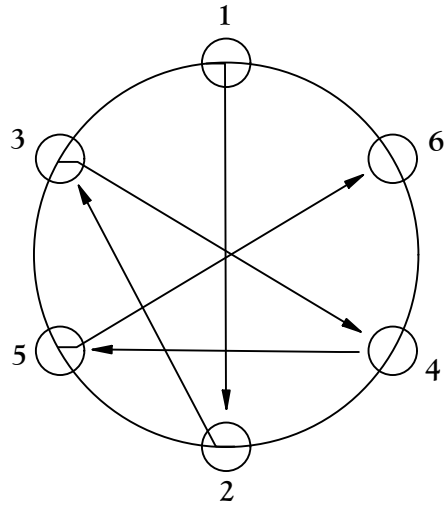
Torque Sequence



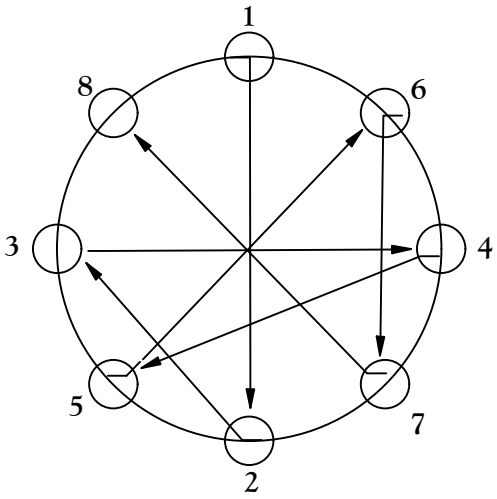
4 Bolt



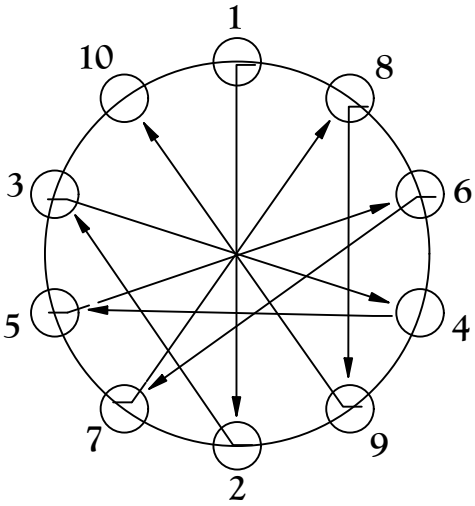
5 Bolt



6 Bolt



8 Bolt



10 Bolt

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Tractor Requirements:

Using the Bale Caddie requires a tractor large enough to power the baler, as well as control the additional weight of both the baler and caddie when hitched together. The tractor must have a two way hydraulic system capable of producing a minimum of 12 GPM at 1500 PSI to operate the Bale Caddie effectively. The Bale Caddie has its own battery system to supply power. The battery will need to be periodically charged.

Hitching to the baler:

NOTE: If the Bale Caddie is not pulled straight behind the baler, difficulty will occur with bales properly entering the receiving bed.

The Bale Caddie is pulled using the baler wagon hitch and a stabilizer strut (see Figure 2 and Figure 3). If your baler does not have a wagon hitch, it will be necessary to purchase one from your baler dealer. The position of the hitch is very important to the satisfactory operation of the Bale Caddie. Most wagon hitches are located directly below the centerline of the bale chamber; however, some are located to the left side of the bale chamber. Since it is very important that bales leaving the bale chamber and enter directly into the center of the receiving bed on the Bale Caddie, the tongue is adjustable to accommodate a variety of balers. Remove the bolts securing the tongue and reposition so that the Bale Caddie's receiving bed is directly in-line with the bale chamber of the baler.

It will be necessary to remove the bale chute from the baler if equipped. When hitching the Bale Caddie to the baler, a "free" distance equal to or greater than the bale length is required between the end of the bale chamber and the leading edge of the roller on the Bale Caddie. This "free" distance is necessary so the gathering chain can advance the bale without having to pull it from the bale chamber. Adjust the baler wagon hitch length till the minimum "free" distance is obtained. Use the two hitch spacer tubes to adjust the tongue height so the receiving bed is lower than the bale chamber.

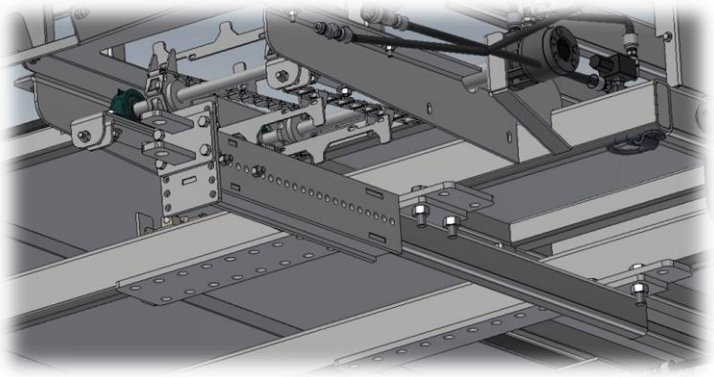


Fig. 2
The adjustable hitch can be moved from side to side by removing the fasteners and then reinstalling them when the desired location has been reached. The hitch can be extended and retracted to aid in reaching the "free distance".

Offset Baler Hitching:

A stabilizer bracket (see Figure 3) is provided for attaching the stabilizer to the baler. This bracket can be attached to most offset balers using the bolt securing the right wheel spindle. In the event that the bracket cannot be attached to the wheel spindle on the baler, it may be necessary to drill a hole for mounting. The adjustable stabilizer strut should be pinned between the right rear corner of the Bale Caddie and the stabilizer bracket on the baler. Adjust the length of the strut so that the Bale Caddie is parallel with the baler.

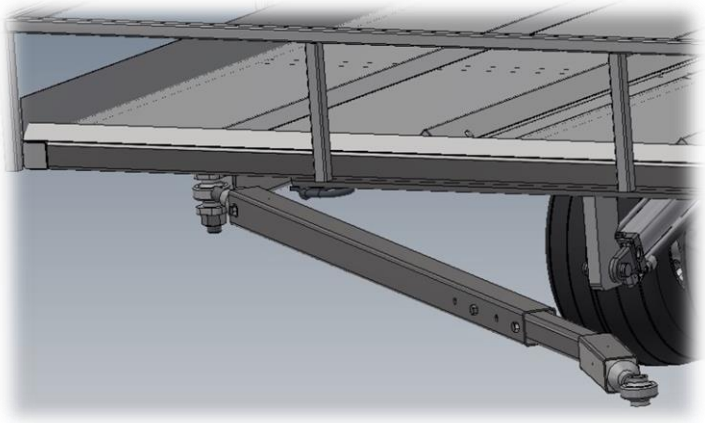


Fig. 3
The stabilizer bar can be pivoted and the arm can be lengthened or shortened depending upon what is needed to attach to the baler. The adjustable ball attachments can be turned for fine tuning of attachment if needed.

Inline Baler Hitching

A stabilizer bracket (see Figure 3) is provided for attaching the stabilizer to the baler. This bracket can be attached to most inline balers using the bolt securing the wagon hitch to the axel. The adjustable stabilizer strut should be pinned between the right rear corner of the Bale Caddie and the stabilizer bracket on the baler. Adjust the length of the strut so that the Bale Caddie is pulled parallel with the baler.

Connecting the Tractor:

NOTE: During operation of the Bale Caddie, the hydraulics must be engaged continuously. It may be necessary to hold the control lever in position using a tie.

DANGER! If the tractor hydraulics control lever is tied in place, the operator must undo the tie, shut down the hydraulic circuit, shut down the tractor and relieve the pressure prior to any servicing on the baler, bale caddie and/or bale grabber. If not, serious injury or death could result!

The Bale Caddie operates using the tractor hydraulic system and a 12 volt electrical system from the on board battery. Long hydraulic hoses are provided to make the connection between the tractor and the Bale Caddie. Route the hydraulic hoses from the Bale Caddie to the tractor ensuring that the hoses have room to flex and are out of the way and won't become entangled in any moving parts. Use securing ties to hold the hydraulic hoses in place. Couple the hydraulic hoses to the quick connectors at the Bale Caddie and to the rear hydraulic remotes on the tractor. Use securing ties to bundle the hoses together where necessary.

After the hydraulics are connected, test the direction of the roller chain. The chain should rotate so that it will bring the bales aboard the bale caddie. If the gathering chain is in the reverse direction, move the outlet lever the opposite direction or shut down the hydraulic outlet and reverse the hoses on the outlet.

BALE CADDIE OPERATIONAL ADJUSTMENT

Adjusting the baler

It is important that the baler produce firm bales of the appropriate length when using the Bale Caddie. Adjust the bale tension appropriately so the bales are not loose and sloppy. Loose bales may cause problems with the operation of the Bale Caddie and will be difficult to handle when using the Bale Grabber. Please refer to the baler owner's manual on how to adjust the baler.

Adjusting the roller chain:

The speed of the roller chain is controlled by a variable flow control connected to the hydraulic motor (Fig. 4). Using the correct roller chain speed is critical to successful operation of the Bale Caddie. Increasing the speed makes the roller chain more aggressive, while decreasing the speed makes it less aggressive. If the roller chain is running too fast, it will throw the bales too far back onto the receiving bed. The ideal speed will deposit the front bale in a series of three just behind the roller chain.

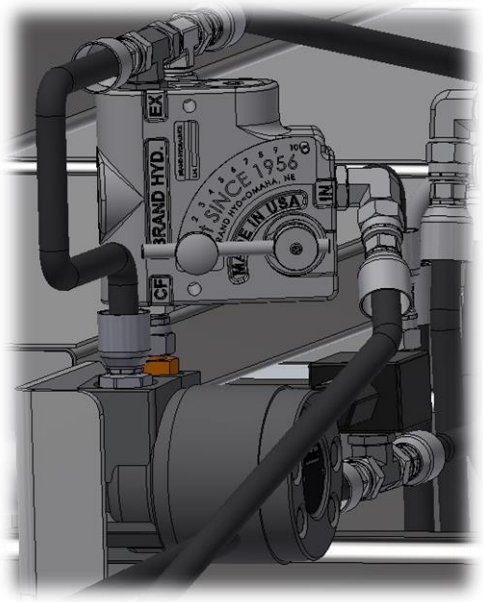


Fig. 4
The variable flow control adjusts the amount of hydraulic oil flow which will adjust the speed of the roller chain. The higher the number, the faster the chain will turn, and the lower the number, the slower the chain will turn. Once the correct speed has been achieved, lock the adjusting bar in place with the set screw.

SENSOR ADJUSTMENTS

Bale Gate Push Switch

There is a single adjustment to make on the Bale Gate Push Switch (Fig. 5). This switch is located at the left rear corner of the Bale Caddie. It is used to detect when the appropriate number of bales are present on the receiving bed of the Bale Caddie. The sensor is activated when the push bar contacts the sensor wand and pushes it rearward. The sensor is adjusted by loosening the two mounting bolts and nuts. The sensor is easily moved back and forth until the correct position is found that allows the push bar to work correctly when three bales are loaded onto it. When the sensor is activated, it will cause the cross slide to move the loaded bales onto the dump bed.

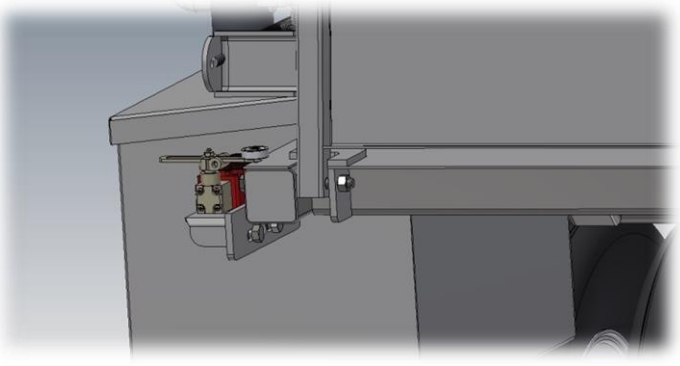


Fig. 5
The Bale Gate Push Switch is activated by the rear gate of the bale caddie. The sensor can be adjusted to get the correct activation to push the bales onto the bale dump bed. To adjust, loosen the two bolts and adjust forward or backward. Once in place, tighten the bolts. The lever can be adjusted as well.

Push Bar Home Switch

NOTE: If the switch is too far towards the outside, it will not contact the Cross-Slide Cylinder. This will affect the Dump Bed since the Push Bar needs to be in the home position in order for it to dump.

The Push Bar Home Switch is located behind the cover on the left side of the Bale Caddie (Fig. 6). This switch controls the distance that the push bar travels to when returning home. Moving the switch towards the center of the bale caddie will move the home position more towards the center and moving it towards the outside will move the home position more to the outside. The optimum setting for the switch is when the Cross-Slide Cylinder is approximately ¼ inch from being fully retracted.

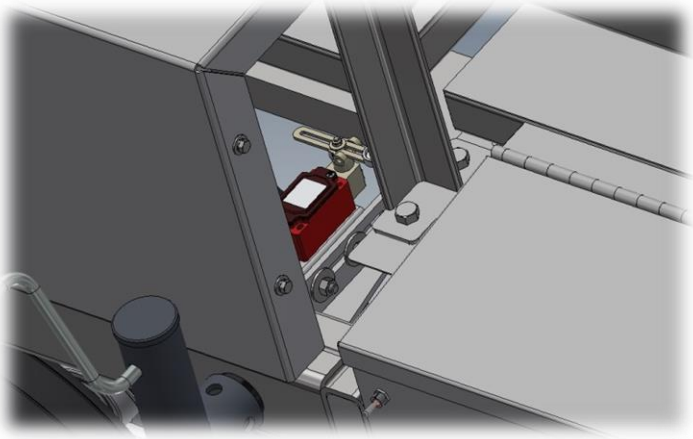


Fig. 6
The Push Bar Home Switch determines the distance the push bar will return. The switch is adjustable. Loosen the adjustment bolts, move to the desired location and retighten the bolts.

Dump Gate Switch

NOTE: Although the Dump Gate Switch is activated, a delay will occur and the bed will not start to tilt until the push bar is back to its home position.

The Dump Gate Switch is located at the right rear of the dump bed (Fig. 7). A single adjustment is made on the Dump Gate Switch. This switch is located at the right rear corner of the Bale Caddie. The switch is activated when the dump bed is filled with the appropriate number of bales and the bar switch arm is pushed to the right. To adjust the dump gate switch, loosen the two mounting bolts. Once the mounting bolts are loose, slide the switch to the right or to the left depending upon what is needed to the get the dump bed to operate as desired. Retighten the mounting bolts after adjustment has been made.

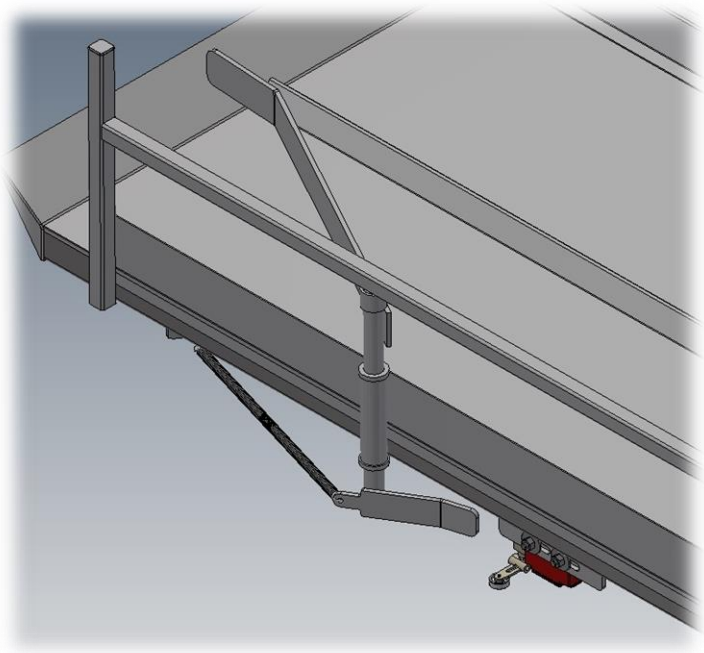


Fig. 7
The Dump Gate Switch is located under the right rear corner of the bale bed. The spring is to return the activation lever after the bales have been dumped.

Tilt Bed Home Switch

NOTE: If the switch is set too low, it will not contact the dump bed to shut the circuit off. This will cause the drop in hydraulic pressure and overall performance of the Bale Caddie.

The Tilt Bed Home Switch is located under the bale bed towards the front of the bale bed (Fig. 8). This switch controls the home position of the dump bed. Moving the switch up will raise the front of the dump bed and moving it down will lower it. The optimum setting for the switch is when the dump bed is sitting on the stops.

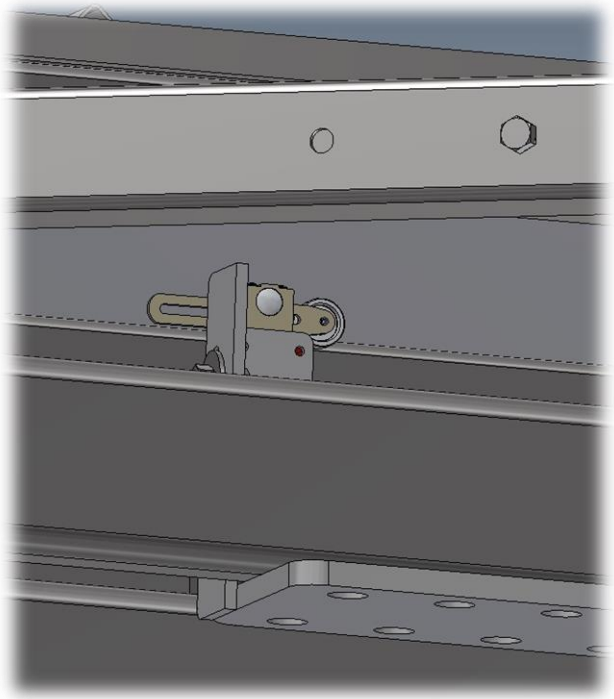


Fig. 8
The Tilt Bed Home Switch determines the home position of the bale bed after it dumps the load of bales.

 Danger!

Make adjustments to the Tilt Bed Home Switch when the Dump Bed is in the lowered position. Never place yourself or anyone under the Dump Bed when it is raised as severe injury or death could result!

Relief Valve Setting

The Bale Caddie is equipped with a hydraulic relief valve (Fig. 9) that is used to relieve the hydraulic pressure for operating the push bar and tilt bed cylinders. It has no effect on the hydraulic pressure available to the roller chain, as it is relieved by the tractor hydraulic system. Although the hydraulic relief valve is adjustable, it has been factory set for optimum operation and should not be adjusted.

During field operation of the Bale Caddie, the cylinders extend to full stroke and are "deadheaded." While the cylinders are "deadheaded" the relief valve will be activated and a squealing sound will be heard, indicating that hydraulic oil is bypassing through the relief valve back to the tractor. The relief valve will also activate while the tilt bed is lowering. This is necessary because the tilt cylinder is restricted to prevent the tilt bed from descending too quickly. Finally, the relief valve will also be activated when the pressure drop through the control valve exceeds the relief valve setting. This can occur when more than 12 GPM is being used to operate the Bale Caddie, but should not be a concern.

Adjusting the relief valve setting higher will not eliminate the squealing sound, but will result in excessive hydraulic system heating. Overheating the hydraulic oil is counterproductive to the operation of the Bale Caddie and detrimental to the tractor hydraulic system.

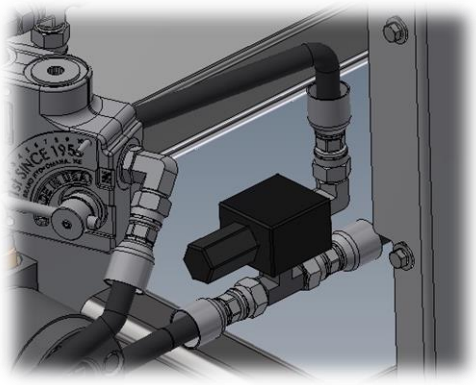


Fig. 9
The pressure relief valve is found under the hydraulics cover of the bale caddie.

Dump Bed Speed Control

A one way adjustable needle valve is used to control the descent speed for the Dump Bed of the Bale Caddie (Fig. 10). Since it is a one way control valve, it has no effect on the dump speed. This valve is located under the cover on the right side, but can be reached from the front. Turn the knob clockwise to slow the speed that the tilt bed descends, and counterclockwise to increase the speed.

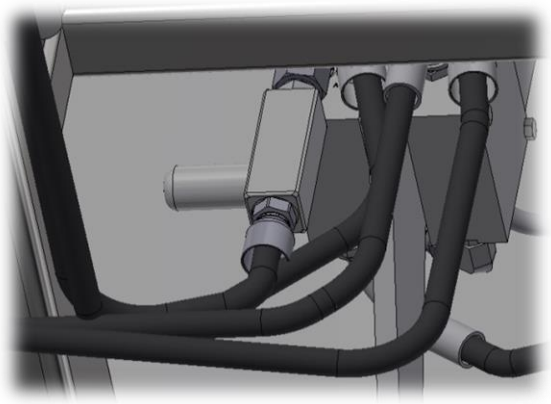


Fig. 10
The adjustable needle valve is found under the hydraulics cover of the bale caddie.

Tire Inflation

The Bale Caddie is equipped with flotation tires that perform best when inflated to 12-15 PSI. Over-inflated tires will result in excessive bouncing which may make it difficult to prevent unnecessary movement of bales on the Bale Caddie while baling.

The two small tires used to hold the bales down on the roller require 25-30 PSI to operate properly. Please check tire pressure and inflate to the designated pressure before operating the Bale Caddie.

Maintenance

Grease Zerk Locations

The Bale Caddie has seven grease zerks (Fig. 11 and Fig. 12)

1. 3 for the roller chain
2. 2 for the wheel pivot bushings
3. 2 for the bed hinge

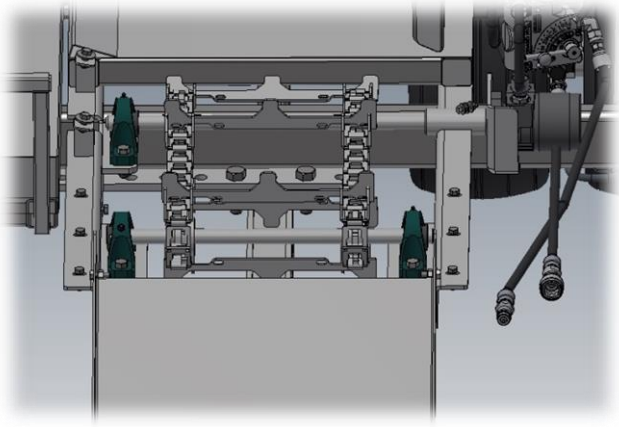


Fig. 11
Grease zerks for the roller chain. Total of 3 grease zerks for the bearings.

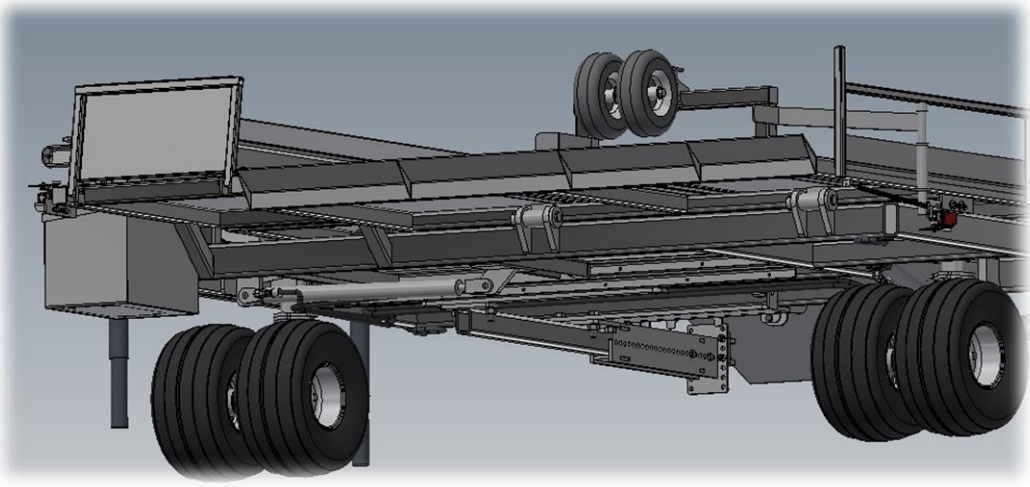


Fig. 12
Grease zerks for the bed hinges and the wheel pivot bushings.

Bale Caddie 1243 Specifications

Operational Requirements

Hydraulics Pressure:	12 GPM*
Electrical:	12 VDC**

Capacity

Bale:	8 or 12 ***
Hydraulic oil:	External Source

Tires

Main Frame Size:	18 x 8.50 x 8
Bale Guide Size:	10 x 10 x 3.5
Type:	Tubeless
Main Frame Pressure:	12-15 PSI
Bale Guide Pressure:	25-30 PSI

Bale Bed Cylinder

Bore Size:	2”
Rod Size:	1-1/8”
Stroke:	20”

Pusher Bar Cylinder

Bore Size:	1-1/2”
Rod Size:	1”
Stroke:	24”

Bale Grabber Specifications

Capacity

12 Pack Long:	12 Bales
12 Pack Short:	12 Bales

Cylinder

Bore Size:	2”
Rod Size:	1-1/4”
Stroke:	10”

NOTES:

* A continuous flow of hydraulic pressure needs to be supplied by an external source. Patriot Equipment recommends using the rear remotes on the tractor. The bale caddie requires a minimum of 12 GPM at 1500 PSI to operate properly.

** 12 volts DC is required for the system to operate properly.

*** Bale capacity will depend on bale length. Bales 33 inches in length or less will have a capacity of 12 bales. Bales 34 inches to 49 inches will have a capacity of 8 bales.

Specifications are subject to change without notice and without liability.

TORQUE DATA FOR STANDARD NUTS, BOLTS, AND CAPSCREWS.

Tighten all bolts to torques specified in chart unless otherwise noted. Check tightness of bolts periodically, using bolt chart as guide. Replace hardware with same grade bolt.

NOTE: Unless otherwise specified, high-strength Grade 5 hex bolts are used throughout assembly of equipment.

Torque Specifications

Bolt Torque for Standard bolts *

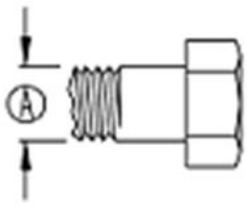
	GRADE 2		GRADE 5		GRADE 8	
"A"	lb-ft	(N.m)	lb-ft	(N.m)	lb-ft	(N.m)
1/4"	6	(8)	9	(12)	12	(16)
5/16"	10	(13)	18	(25)	25	(35)
3/8"	20	(27)	30	(40)	45	(60)
7/16"	30	(40)	50	(70)	80	(110)
1/2"	45	(60)	75	(100)	115	(155)
9/16"	70	(95)	115	(155)	165	(220)
5/8"	95	(130)	150	(200)	225	(300)
3/4"	165	(225)	290	(390)	400	(540)
7/8"	170	(230)	420	(570)	650	(880)
1"	225	(300)	630	(850)	970	(1310)

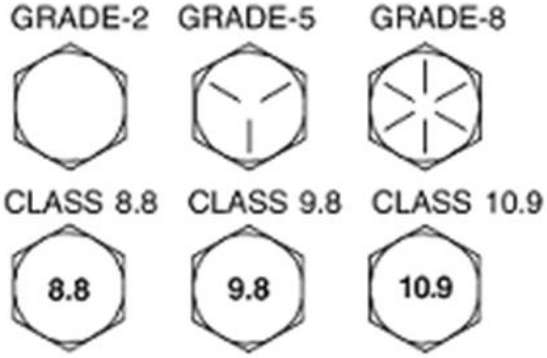
Bolt Torque for Metric bolts *

	CLASS 8.8		CLASS 9.8		CLASS 10.9	
"A"	lb-ft	(N.m)	lb-ft	(N.m)	lb-ft	(N.m)
6	9	(13)	10	(14)	13	(17)
7	15	(21)	18	(24)	21	(29)
8	23	(31)	25	(34)	31	(42)
10	45	(61)	50	(68)	61	(83)
12	78	(106)	88	(118)	106	(144)
14	125	(169)	140	(189)	170	(230)
16	194	(263)	216	(293)	263	(357)
18	268	(363)	--	--	364	(493)
20	378	(513)	--	--	515	(689)
22	516	(699)	--	--	702	(952)
24	654	(886)	--	--	890	(1206)

Torque figures indicated are valid for non-greased or non-oiled threads and heads unless otherwise specified. Therefore, do not grease or oil bolts or capscrews unless otherwise specified in this manual. When using locking elements, increase torque values by 5%.

*GRADE or CLASS value for bolts and capscrews are identified by their head markings.





Bale Caddie/Bale Grabber Hourly Service Schedule							
Periodic Service	Daily	8	16	24	50	100	200
Check/tighten Hardware		BI			RS		
Check Hydraulic lines and fittings	BI			RS			
Check pins, bushings, and zerks				AI			
Grease Zerks	RS	RS					
Clean Out Debris from Equipment	RS						
BALE CADDIE ONLY							
Tighten and Torque Wheel Bolts			BI				RS

KEY:

"RS" = Required Service Hourly Interval (Continue Repeating Service Intervals)
"BI" = Perform Service at Initial Break-In (Thereafter at hour interval shown)
"AI" = Annually or at Hourly Interval (Whichever occurs FIRST)

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Troubleshooting

Troubleshooting

Roller

Problem	Possible Cause	Solution
Roller will not turn	No Hydraulic Flow	Check hydraulic disconnects for proper connection
	Stalled roller	Check for roller obstruction
	Hydraulic GPM/Pressure not adequate	Refer to tractor manual for adjustment Use a tractor with adequate GPM/Pressure
	Oil going over tractor relief	Refer to tractor owner manual
Roller turns wrong direction	Oil flow to Bale Caddie is reversed	Interchange hose connection at tractor

Troubleshooting

Push Bar

Problem	Possible Cause	Solution
Push Bar does not move to the right	No hydraulics flow	Check hydraulic disconnects for proper connection
	No electrical power.	Check electrical plugs for proper connection.
	Bale sensor arm and/or sensor improperly adjusted.	Refer to Operation Adjustment
	Tilt Bed not completely lowered	See Tilt Bed troubleshooting section
	Tilt Bed dump sensor improperly adjusted	Refer to Operation Adjustment
Push Bar does not move to the left.	No hydraulic flow.	Check hydraulic disconnects for proper connection.
	No electrical power.	Check electrical plugs for proper connection.
	Bale sensor arm caught on end of bale	Refer to Operation Adjustment
	Bale sensor arm and/or sensor improperly adjusted	Refer to Operation Adjustment
	Bale Push Angle on improperly adjusted	Refer to Operation Adjustment
Push Bar does not fully push the bales onto the dump bed.	Bale sensor arm and/or sensor improperly adjusted for bale length.	Refer to Operation Adjustment
Push Bar does not move far enough to the right. and/or left	Bale sensor arm and/or sensor improperly adjusted.	Refer to Operation Adjustment
	Hydraulic Tray sensor not properly adjusted.	Refer to Operation Adjustment
	Hydraulic Tray bearing track has debris built up on it.	Remove debris from bearings and bearing track.
	There is debris built up between the Push Bar arms and Receiving Bed.	Remove debris from area.

Troubleshooting

Tilt Bed

Problem	Possible Cause	Solution
Tilt Bed does not raise	No hydraulic flow	Check hydraulic disconnects for proper connection
	No electrical power	Check electrical plugs for proper connection
	Tilt Bed Bale sensor arm and/or sensor improperly adjusted	Refer to Operation Adjustment
	Push Bar not completely to the left "home position"	See Push Bar troubleshooting section
	Push Bar "home position" sensor improperly adjusted.	Refer to Operation Adjustment
Tilt Bed does not lower	No hydraulic flow	Check hydraulic disconnects for proper connection
	No electrical power	Check electrical plugs for proper connection
	Bale sensor arm and/or sensor improperly adjusted.	Refer to Operation Adjustment
	Push Bar not completely to the left "home position"	See Push Bar troubleshooting section.
	Push Bar "home position" sensor improperly adjusted	Refer to Operation Adjustment
	Flow control valve for Tilt Bed control closed	Adjust flow control valve knob counterclockwise to open
Tilt Bed lowers to fast	Control valve not adjusted properly	Adjust flow control valve knob clockwise to close
Tilt Bed lowers too slow	Control valve not adjusted properly	Adjust flow control valve knob counterclockwise to open

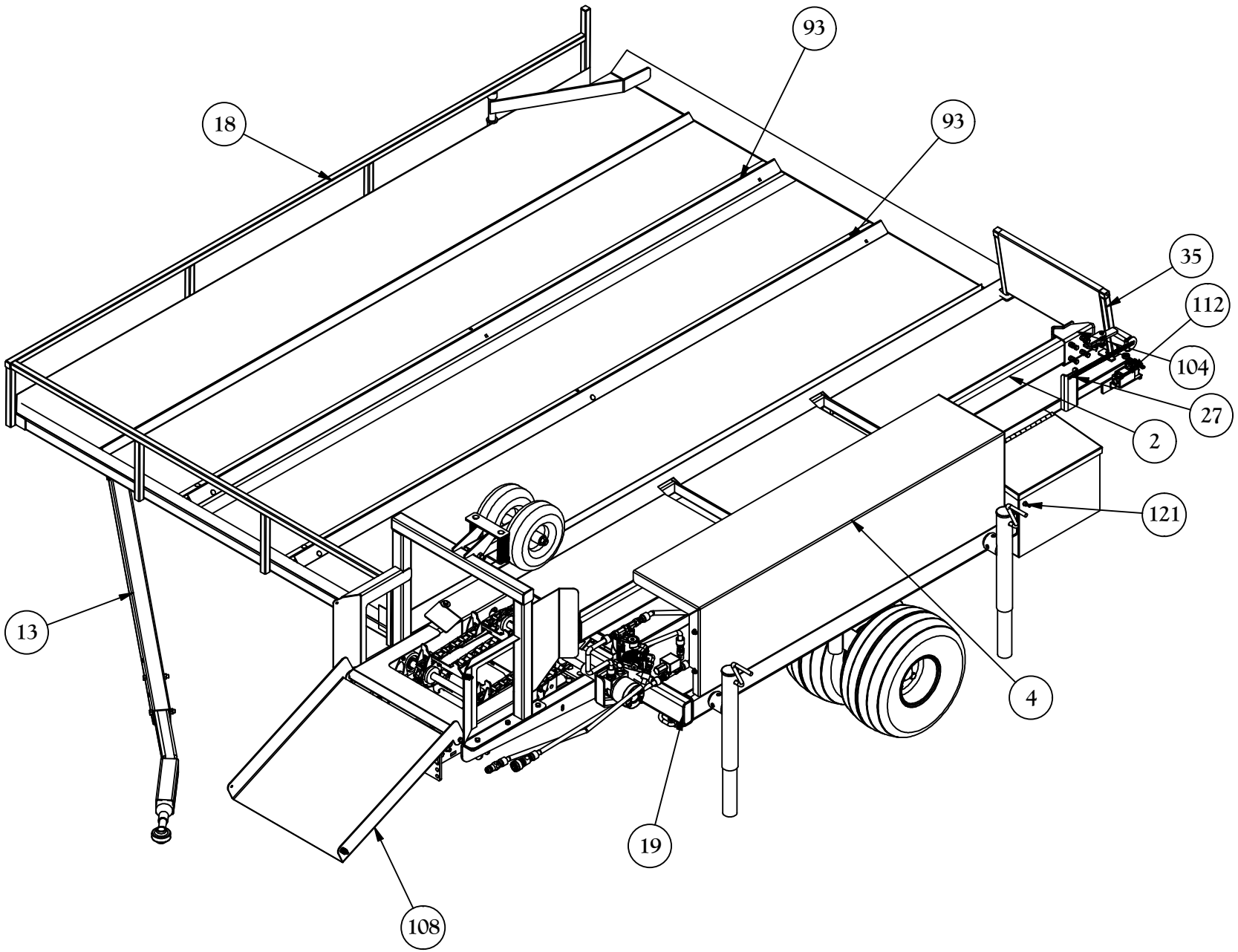
Troubleshooting

Square Bales

Problem	Possible Cause	Solution
Bales catch on the front of the Receiving Bed	Receiving bed too high	Refer to setup
Bales catch on the end of Push Bar	Baler bale chamber not centered on Receiving bed of Bale Caddie.	Refer to setup.
	Bales are banana shaped to left.	Refer to your Balers Owners Manual
	Push Bar not completely to the left "home position"	See Push Bar troubleshooting section
Bales catch on Roller	Roller speed to slow	Increase roller speed slightly to push bales farther rearward
	Bale sensor arm and/or sensor improperly adjusted	Refer to operation adjustment
Bales hanging off the back of the Bale Caddie	Roller speed to fast	Decrease roller speed slightly to lessen the bales rearward movement
	Bale sensor arm and/or sensor improperly adjusted.	Refer to operation adjustment

Parts Diagrams

Bale Caddie Assemblies



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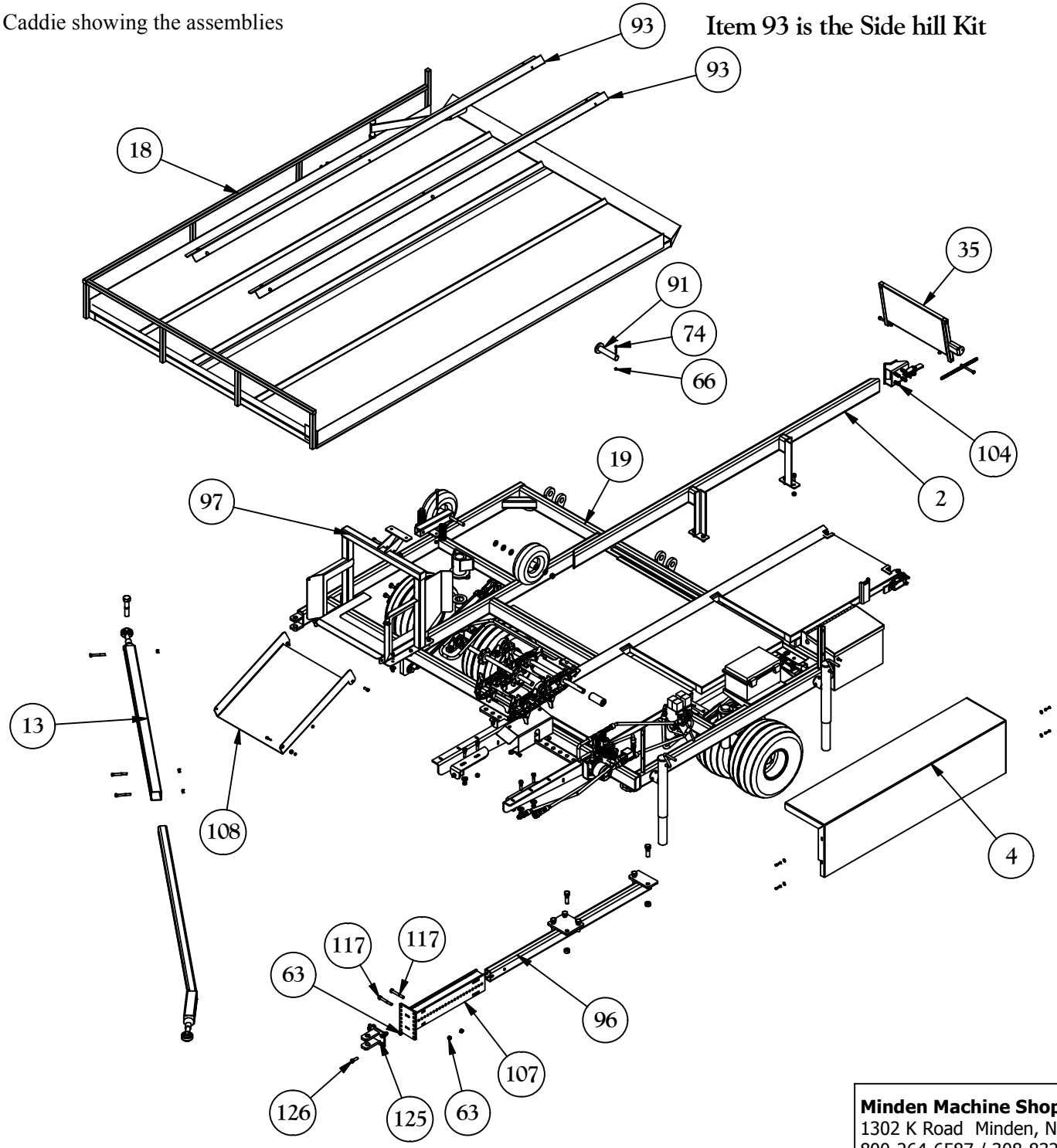
Exploded view of the Bale Caddie showing the assemblies that are in the bale caddie.

Item 93 is the Side hill Kit



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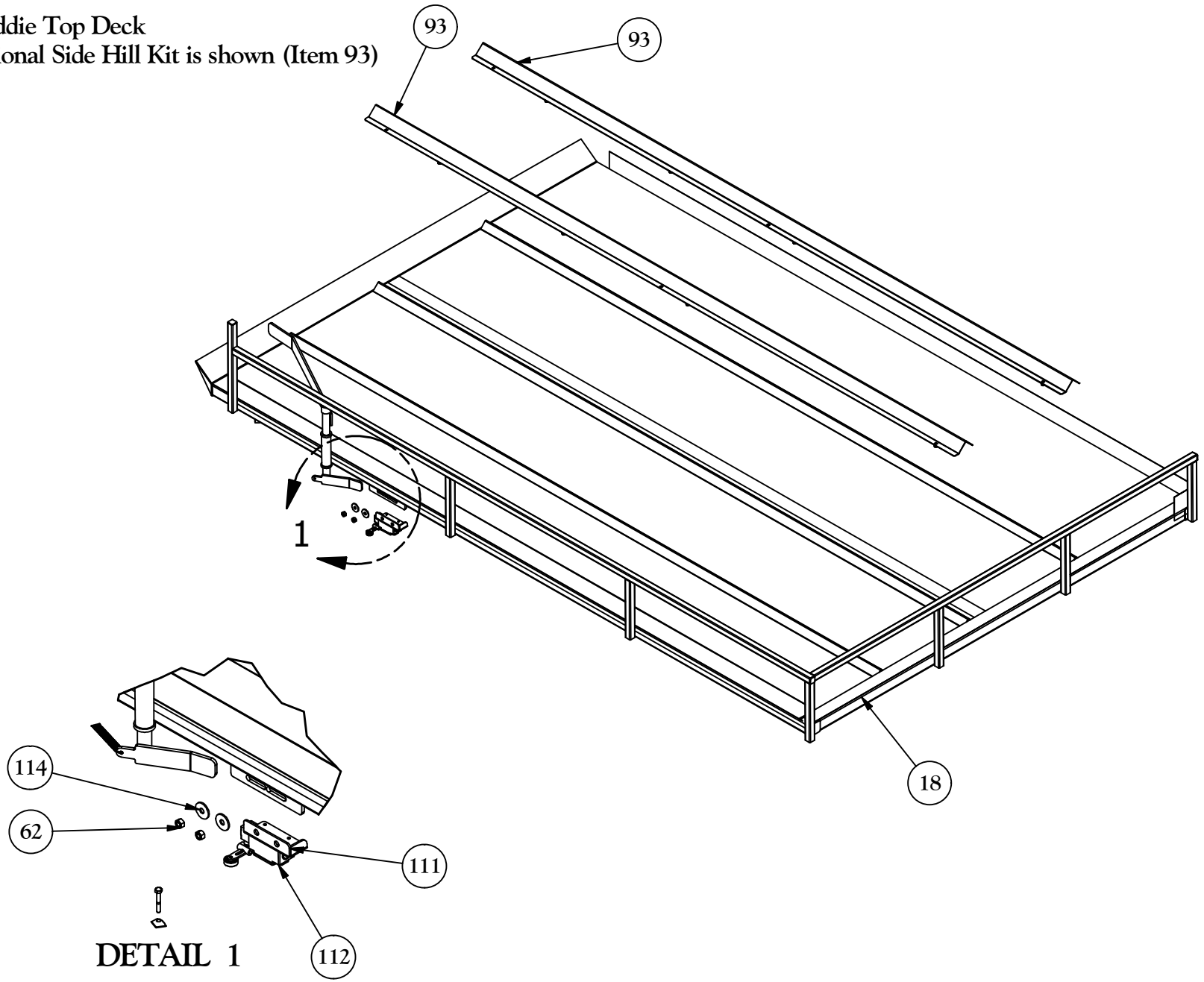
Bale Caddie Top Deck
The optional Side Hill Kit is shown (Item 93)



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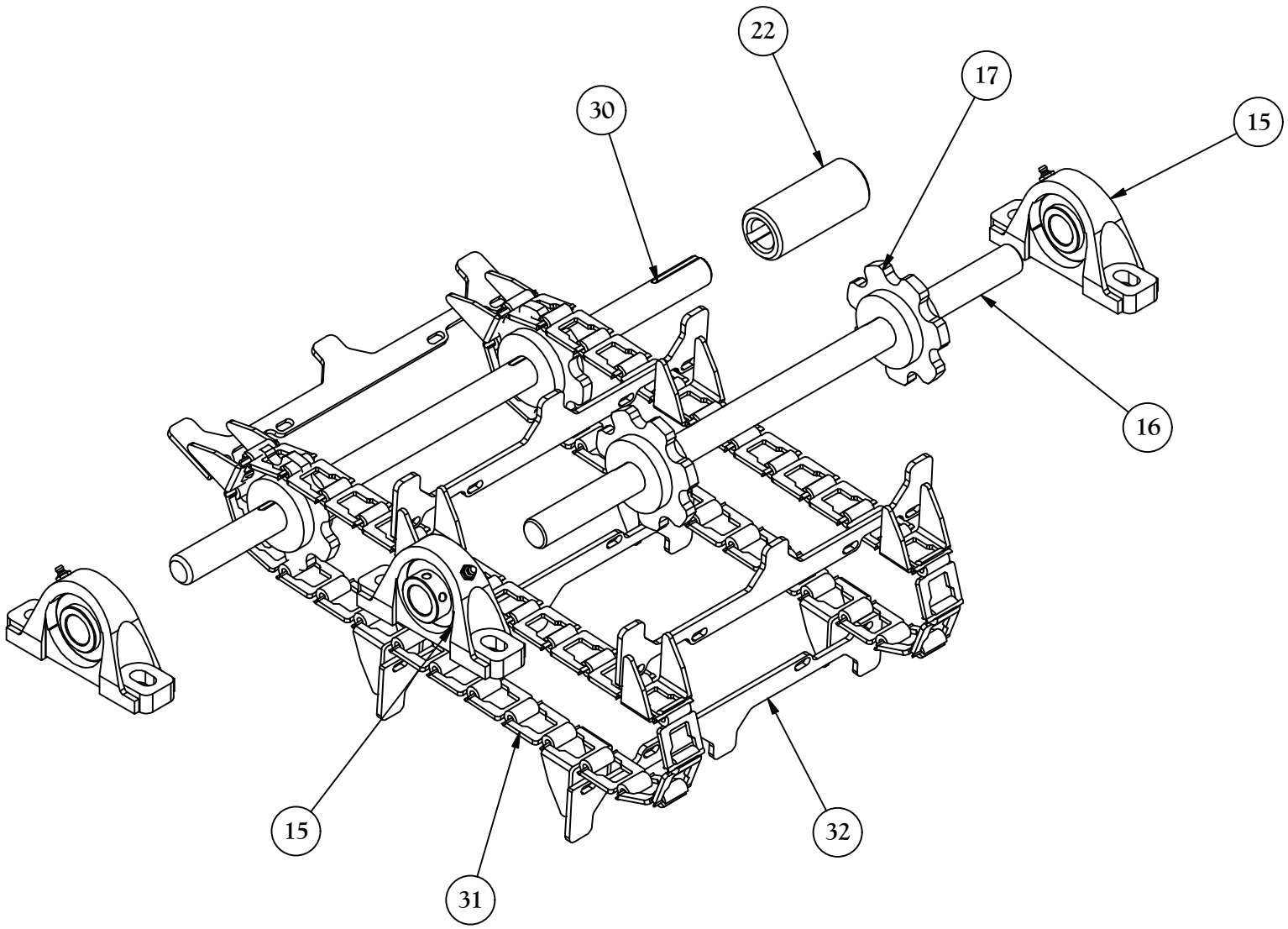

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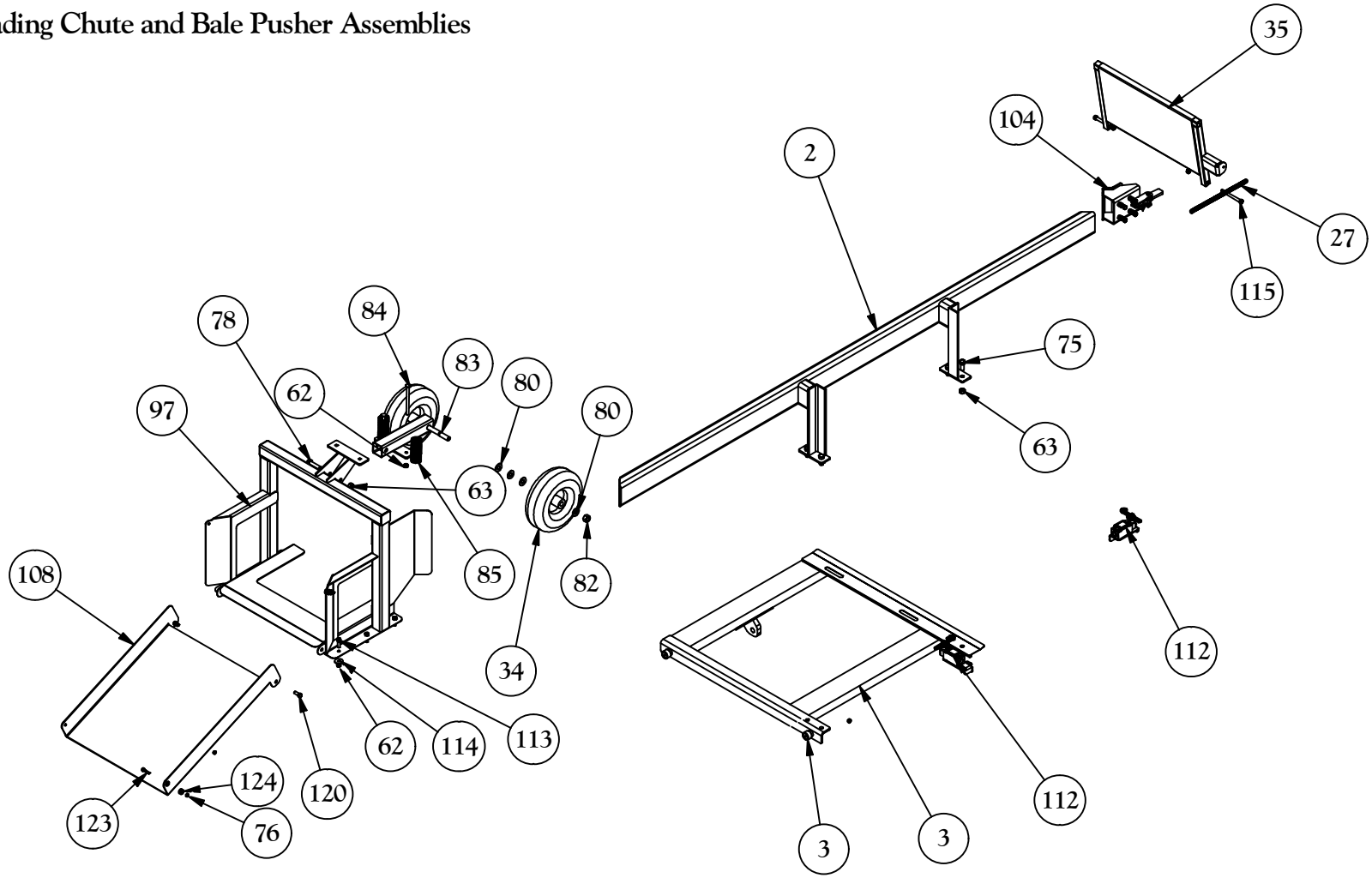
Bale Loading Chute and Bale Pusher Assemblies



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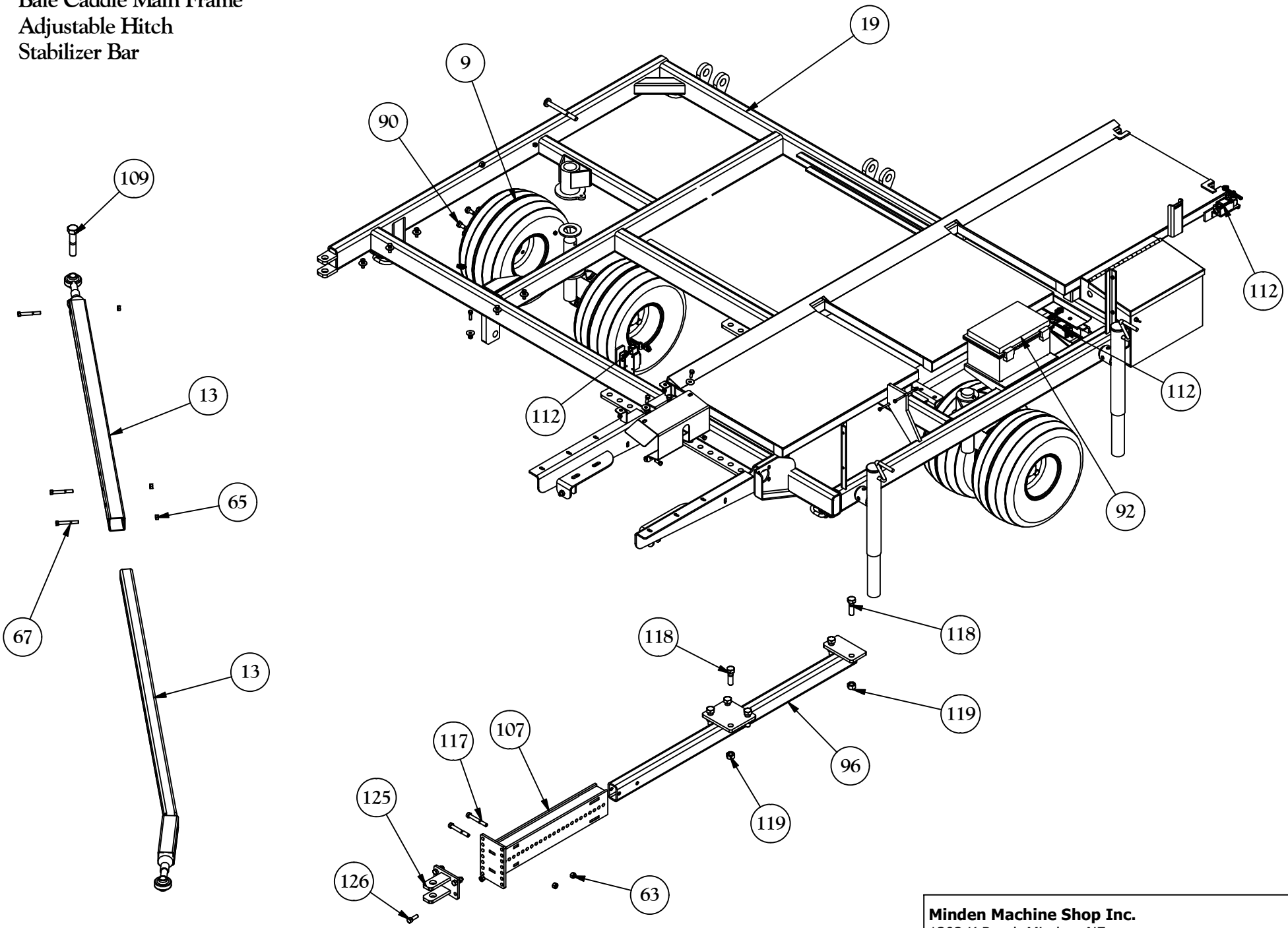
Bale Caddie Main Frame
Adjustable Hitch
Stabilizer Bar



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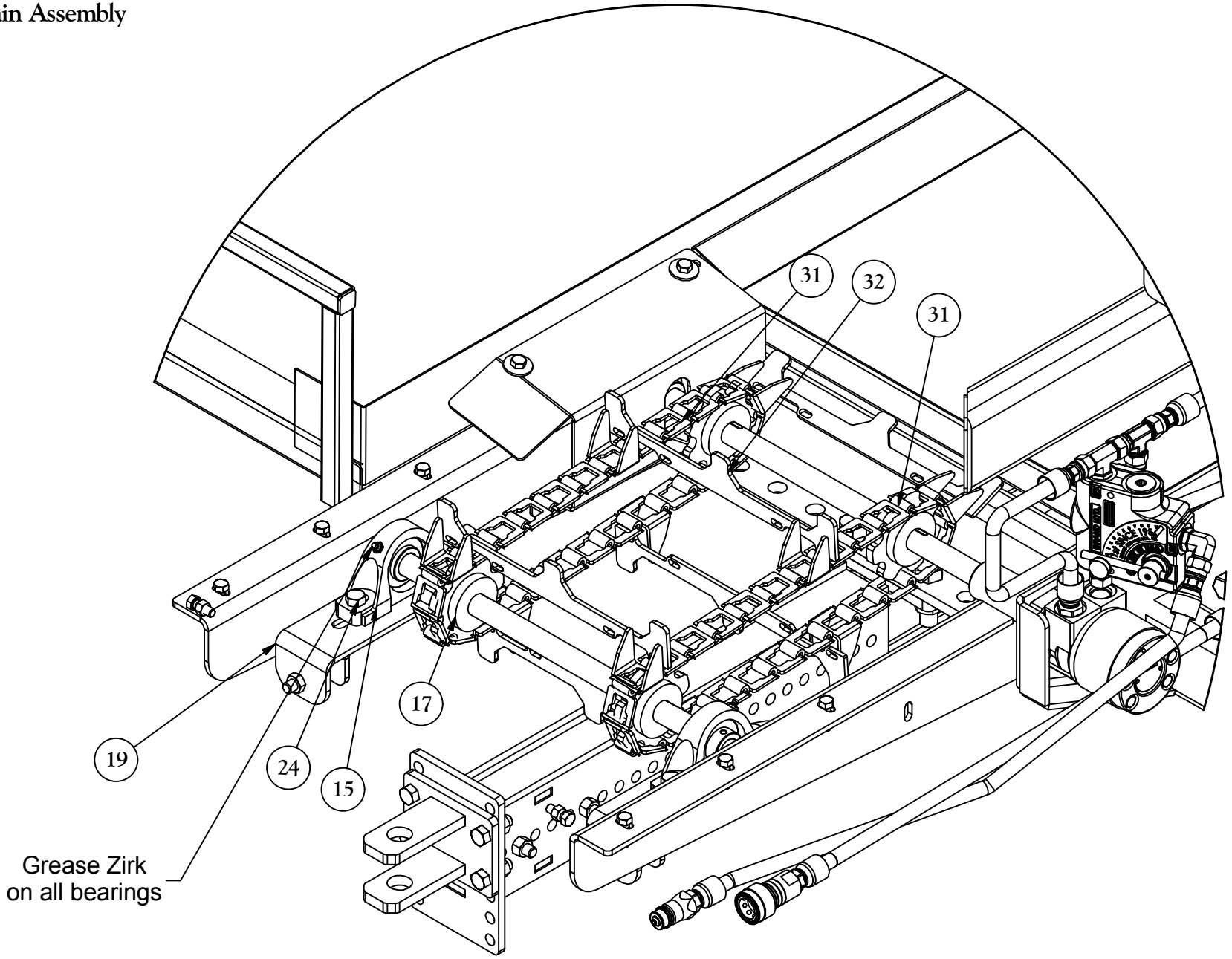
Detail View of the Bale Caddie Bale Loading Chain Assembly



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Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	BC-A002	Wheel Axle Weldment
2	1	BC-A003	Hydraulic Push Bar Weldment
3	1	BC-A004	Hydraulic Tray MK A2
3.1	1	11Y153	HR-1-1/4-XBC Stud Cam Follower
4	1	BC-P067	Hydraulic Cover
7	1	BC25000	2 X 20 Tie Rod Cylinder
9	4	AM3H310	215/60-8 Biased Trailer Tire w/ 8" White Wheel - 5 on 4-1/2 - Load Range C
10	4	SPD545	5 on 4.5 hub/9" spindle
12	1	S4000	Group 24 12V Battery
12.1	1	S2036	Battery Hold Down
12.2	1	S2044	Battery Tray
13	1	BC-A007	Stabilizer Weldment
15	3	BR1160	2 Bolt 1" Bore Pillow Block Bearing
16	1	BC-P190	Idler Shaft Front
17	4	BC-P167	Sprocket 62C7
18	1	BC-A009	Bale Bed Frame Weldment
19	1	BC-A012	Platform Weldment
21	1	BC25015	Hydraulic Motor
22	1	Shaft coupler 1"	127-1604 Shaft Coupler 1"
26	2	TR1605	15" Sidewind Jack 2000 lbs
27	2	Spring Asm Bale Caddie	Bale Push Bar Spring
30	1	BC-P126	Rear Idler Shaft
32	5	BC-P115	Bale Chain Bar
33	1	BC-A015	Lower Spring Mount Bale Tensioner Assembly
34	2	53CM50	Bale Tensioner Wheel Assembly
35	1	BC-A016	Bale Push Bar Frame
85	2	BC-P166	Spring
91	10'	BC2010	#62 CHAIN
92	1	BC2500	Stay Clear Decal
94	1	BC2505	Rotating Decal

Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
93	1	BC2510	7 Points Decal
95	1	BC2515	Hydraulic Fluid Decal
96	1	BC2520	Bale Caddie Decal
97	1	BC2525	1243 Decal
91	2	BC-A031	Bale Bed Pin
92	1	BC2000	Hi Box BC2000 7 x 11 Waterproof
93	2	BC-P176	Hillside Angle Extension
97	1	BC-A041	Bale Chute Upper Frame
100	2	BC-P216	Chain Adjusting Bracket
104	1	BC-A045	Bale Stop Weldment
107	1	BC-A048	Adjustable Hitch Slide
108	1	BC-P235	Bale Chute Ramp
111	4	BC-P239	Switch Mount Box
112	4	Bernstein ENM2-SU1 AV	Switch
116	1	BC-P249	Guard/Slide
121	1	ESB523	Toggle Switch
122	1	TOGGLE-NUT	Toggle Nut
125	1	BC-A049	Adjustable Hitch Clevis

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Bale Caddie Fastener Parts List

Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
61	1	N3/4DL	3/4" Lock Nut
62	24	N3/8DL	3/8" Lock Nut
63	17	N1/2DL	1/2" Lock Nut
64	2	N5/16DL	5/16" Lock Nut
65	3	N7/16DL	7/16" Lock Nut
66	4	N1/4DL	1/4" Lock Nut
67	3	B7/16 X 3.25	7/16" Hex Bolt
70	3	W1/2F	1/2" Plain Washer
73	2	B1/2 X 1.75	1/2" Hex Bolt
74	2	B1/4 X 1.75	1/4" Hex Bolt
75	4	B1/2 X 1.25	1/2" Hex Bolt
76	8	N1/4N	1/4" Hex Nut
77	2	B1/4 X 5	1/4" Hex Bolt
78	1	B1/2 X 3.5	1/2" Hex Bolt
80	8	W5/8F	5/8" Plain Washer
82	1	N5/8DL	5/8" Lock Nut
83	1	B5/8 X 10	5/8" Hex Bolt
84	2	B3/8 X 5.25C	3/8" Carriage Bolt
86	4	W1/4F	1/4" Plain Washer
87	4	W1/4L	1/4" Lock Washer
89	4	B1/4 X 1	1/4" Hex Bolt
94	6	B5/16 x 1CB	5/16 Carriage Bolt
95	16	N5/16NY	5/16 Nylock Nut
102	2	B1/2x2.5	Hex Bolt
103	4	N1/2JN	Hex Jam Nut

Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
109	1	B1x4.5	Hex Bolt
113	6	B3/8x1.25	Hex Bolt
114	18	W3/8F	Plain Washer
115	2	B3/8x4	Hex Bolt
117	2	B12x3.75	Hex Bolt
118	6	B3/4x2.5	Hex Bolt
119	6	N3/4N	Hex Nut
120	14	B3/8x1	Hex Bolt
123	2	B1/4x1.25	Hex Bolt
124	6	W1/4F	Plain Washer
126	4	B1/2x1.5	Hex Bolt

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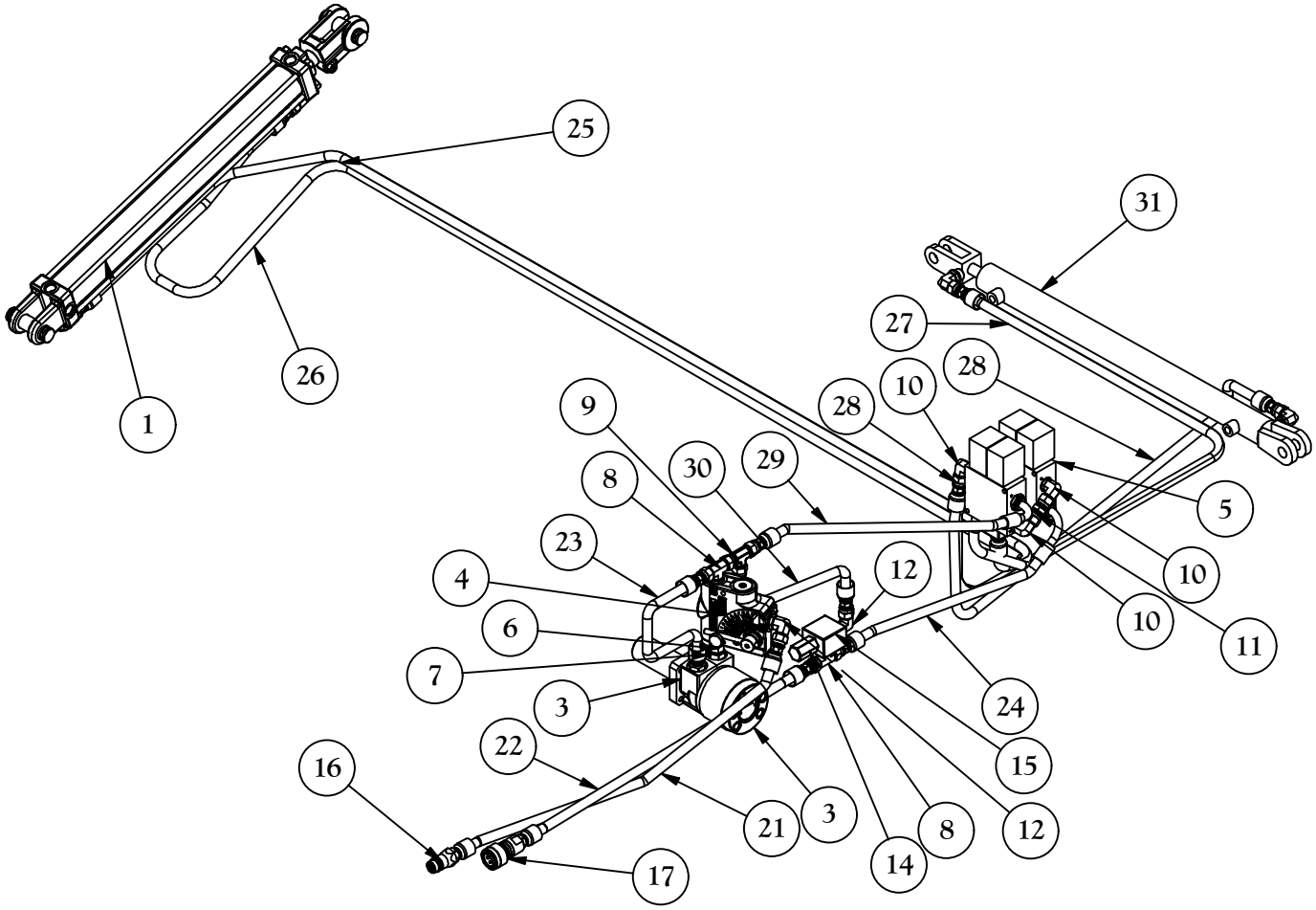
Hydraulics

Bale Caddie 1243
Hydraulic System



Parts List			Parts List		
ITEM	QTY	PART NUMBER	ITEM	QTY	PART NUMBER
1	1	BC25000 (2 X 20 CYLINDER)	19	1	6815-06-06
3	1	BC25015	20	1	6403-NWO-08
4	1	FC51-8SAE	21	1	R1708A-608P08-02400
5	2	9501650	22	1	R1708A-608P08-02400-2
6	1	6402-08-08	23	1	R1706A-608P10-01600
7	1	6400-8-10	24	1	R1706A-608R66-02400-2
8	2	6803-8-8-8	25	1	R1706A-608P08-11800
9	1	6602-08-08-08 MJIC FJIC TEE	26	1	R1706A-608608-11800
10	4	6801-08-06	27	1	R1706A-608R66-07000
11	1	6565-08-08 FJIC FJIC	28	1	R1706A-608608-04400
12	6	6801-08-08	29	1	R1706A-608R66-02400-3
13	1	6500603 Inline Flow Control	30	1	R1706A-608608-01600
14	1	7010930 Cartridge Relief (1450 psi)	31	1	BC25005-1 (1-1/2 x 24 Hyd Cylinder)
15	1	7012818 Cartridge Manifold	32	2	R1708A-P08P08-27600
16	3	2286034 Poppet Style Tip 8			
17	2	2285991			
18	1	6410-06-08			

Complete Hydraulic Kit:
P/N: BC25020

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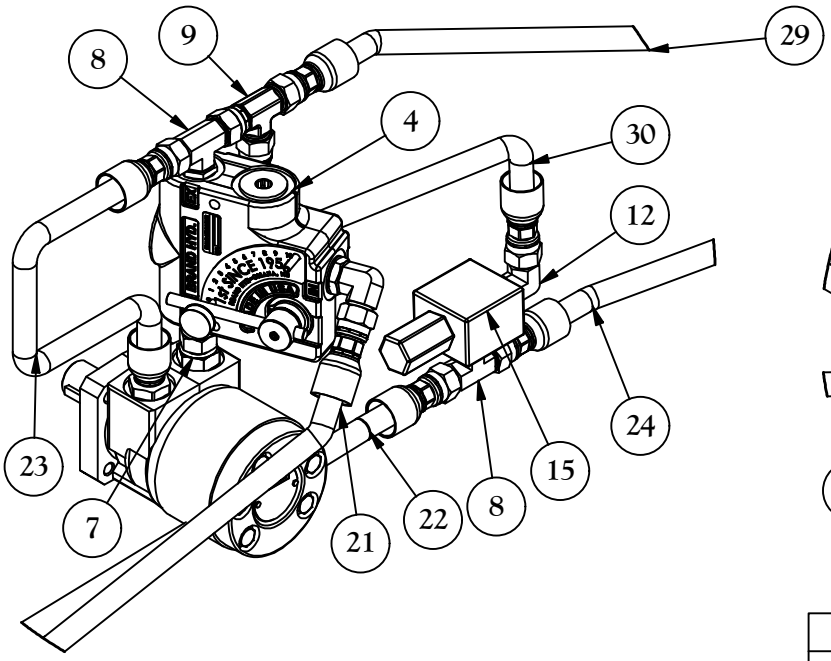
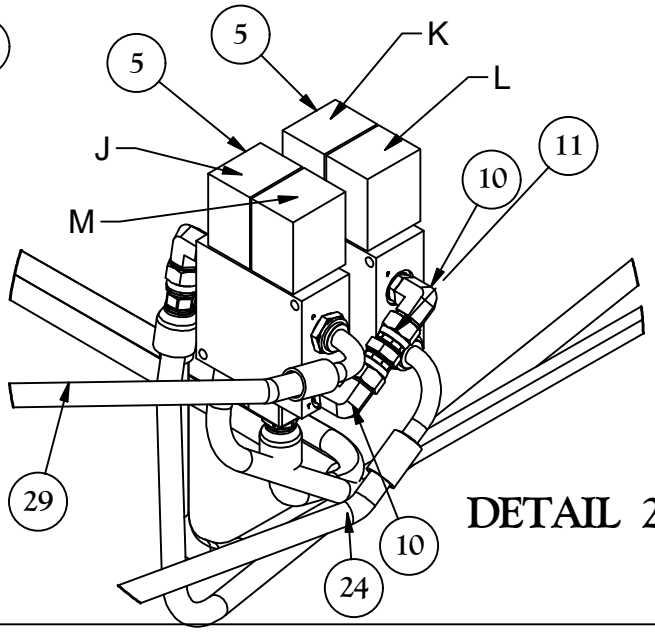
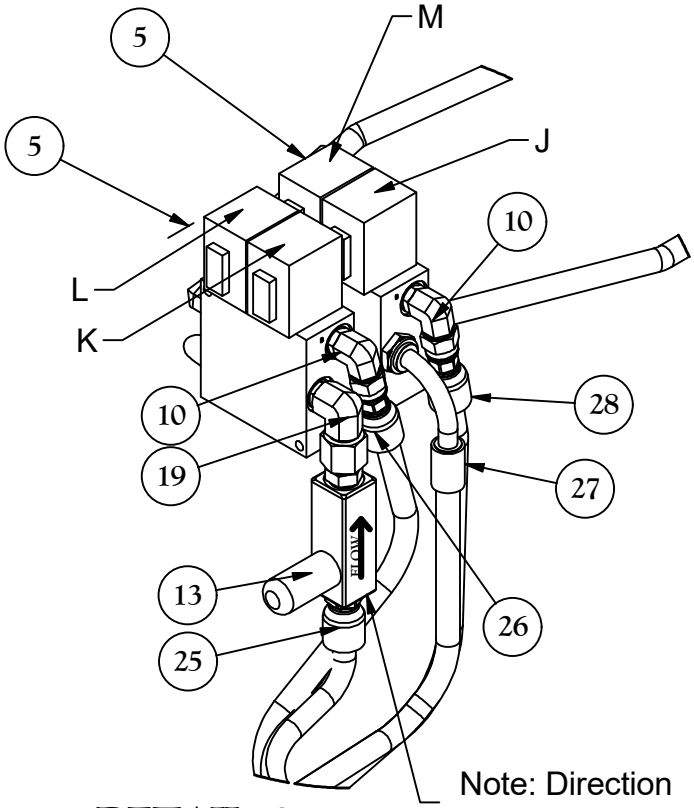


DETAIL 1



DETAIL 2



DETAIL 3

Note: Direction of controlled flow

To tractor ports are labeled P (Pressure) and T (Tank)
To bale caddie are marked A and B.

Parts List		
ITEM	QTY	PART NUMBER
1	1	BC25000 (2 X 20 CYLINDER)
3	1	BC25015
4	1	FC51-8SAE
5	2	9501650
6	1	6402-08-08
7	1	6400-8-10
8	2	6803-8-8-8
9	1	6602-08-08-08 MJIC FJIC TEE
10	4	6801-08-06
11	1	6565-08-08 FJIC FJIC
12	6	6801-08-08
13	1	6500603 Inline Flow Control
14	1	7010930 Cartridge Relief (1450 psi)
15	1	7012818 Cartridge Manifold
16	3	2286034 Poppet Style Tip 8
17	2	2285991
18	1	6410-06-08
19	1	6815-06-06
20	1	6403-NWO-08
21	1	R1708A-608P08-02400
22	1	R1708A-608P08-02400-2
23	1	R1706A-608P10-01600
24	1	R1706A-608R66-02400-2
25	1	R1706A-608P08-11800
26	1	R1706A-608608-11800
27	1	R1706A-608R66-07000
28	1	R1706A-608608-04400
29	1	R1706A-608R66-02400-3
30	1	R1706A-608608-01600
31	1	BC25005-1 (1-1/2 x 24 Hyd Cylinder)
32	2	R1708A-P08P08-27600

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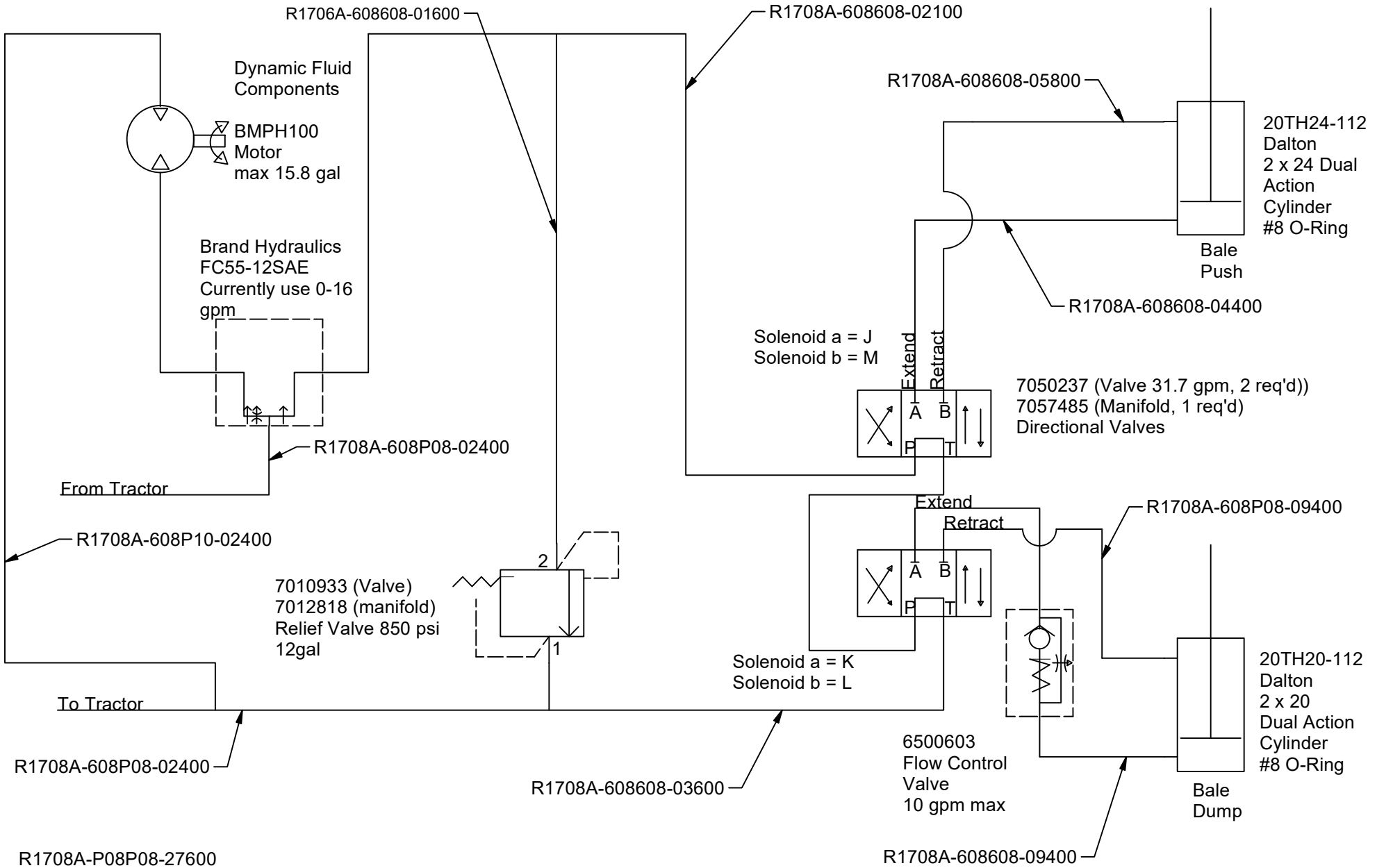
Bale Caddie Hydraulics with Inductive Proximity Sensors

The following schematic details the hydraulic system of the Bale Caddie 1243 with the use of the proximity sensors. The bale caddie hydraulic system has been updated to make better use of current tractor system hydraulics. The hydraulic schematic will list the part number of the hoses as well as the different hydraulic circuits which have labels to assist with the troubleshooting and part replacement.

Bale Caddie Hydraulic Schematic



R1708A-P08P08-27600
Extension Hoses Qty. 2

J = Push home
M = Push extend

K = Dump retract
L = Dump extend

Solenoid A activates: flow is port B to port A
Solenoid B activates: flow is port A to port B

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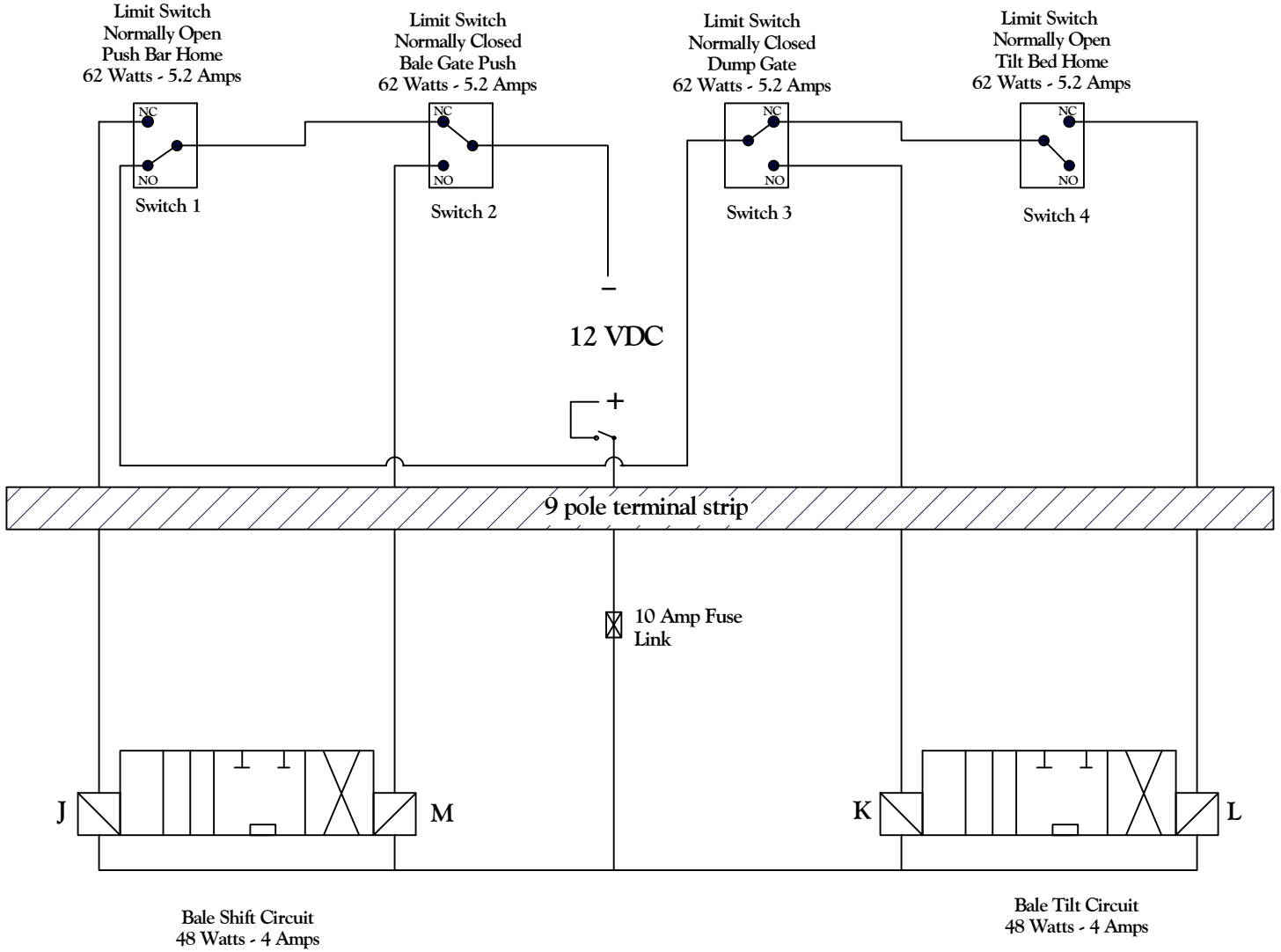
ELECTRONICS

Bale Caddie 1243 Electrical Schematic



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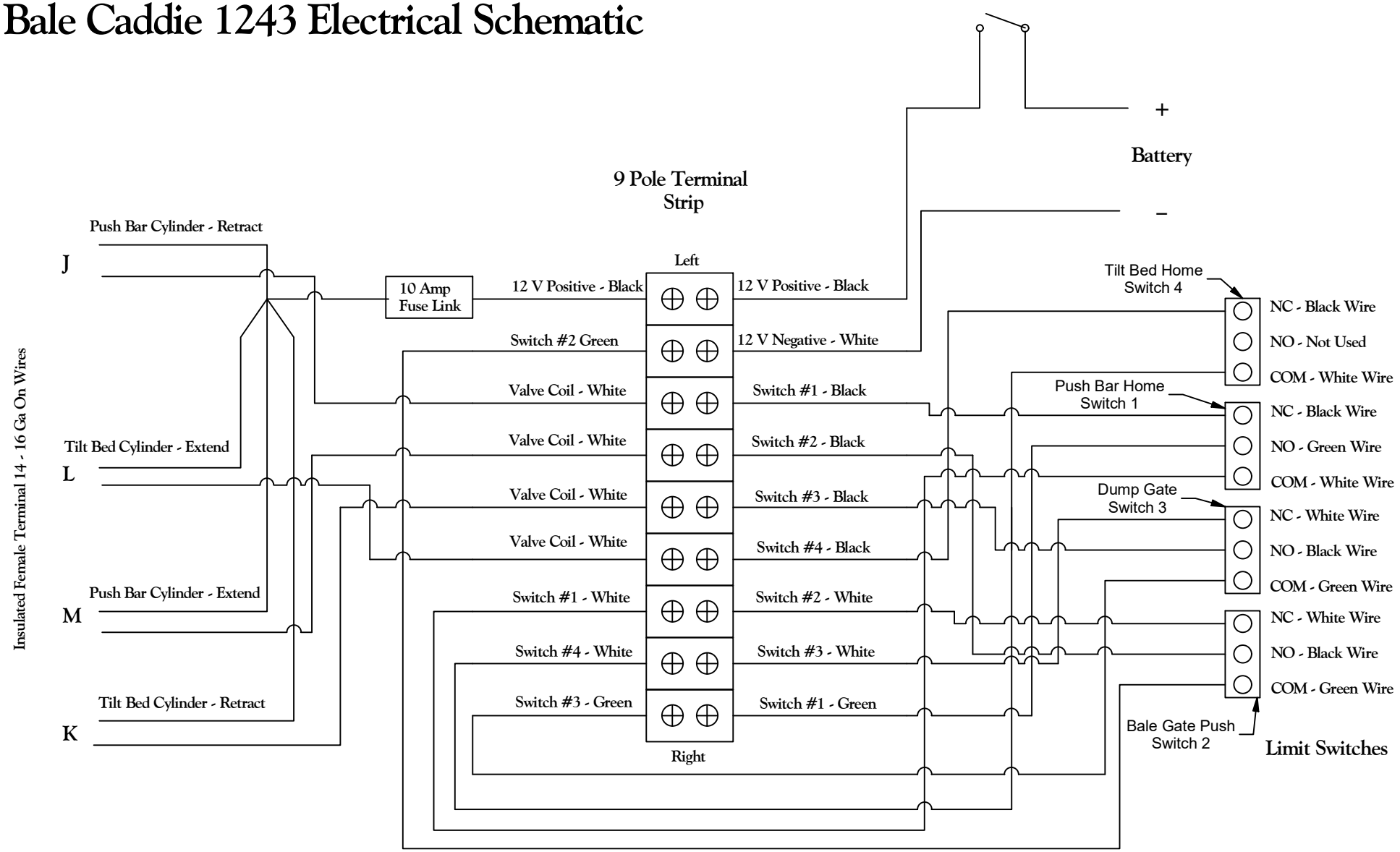
Bale Caddie 1243 Electrical Schematic



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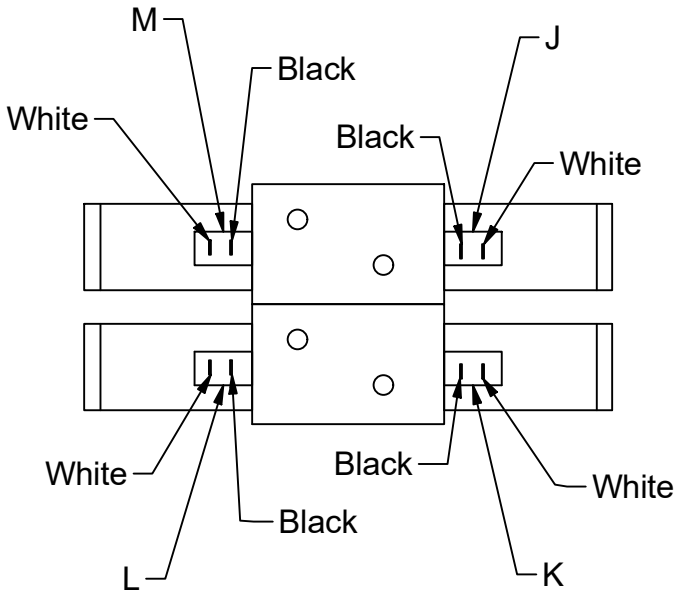
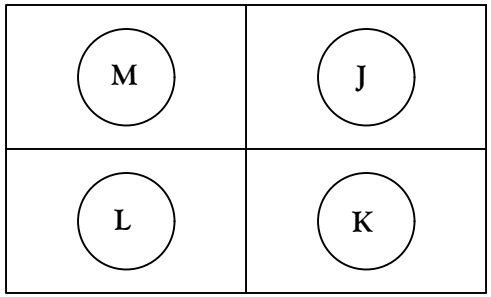
Bale Caddie 1243 Valve Coil Connections

Front of Bale Caddie



J = Push Bar Cylinder Retract
M = Push Bar Cylinder Extend

K = Tilt Bed Cylinder Retract
L = Tilt Bed Cylinder Extend



Top View

Black Wire is on top connector
White Wire is on bottom connector

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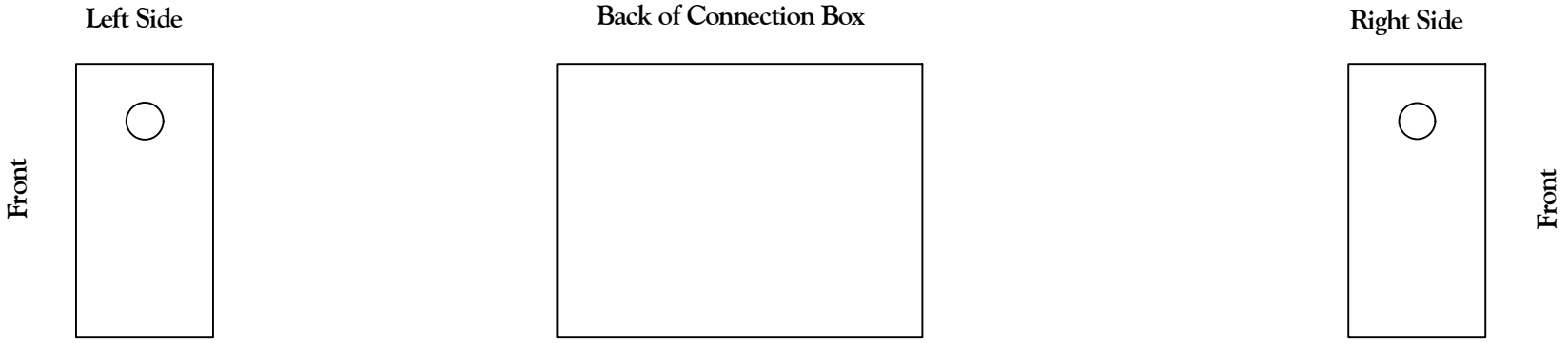
Grommet Location for Electrical Box



Hinge for lid is on this end

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Bale Caddie Electrical Parts

Electrical			
Item	Qty	Part Number	Description
1	1	46210	BLADE FUSE - 10 AMP
2	1	FHAC0002XP	FUSE HOLDER - 12 GA
3	4	BC2005	LIMIT SWITCH
4	6	2650	STRAIN RELIEF CONNECTORS
5	1	BC2020	9-POLE TERMINAL STRIP
6	8	FD-16-25-FN	INSULATED FEMALE TERMINAL 14-16 GA
7	26	ST-16-06-NY	SPADE TERMINAL 14-16 GA BLUE
8	1	TLO	WIRE NUT - ORANGE
9	514"	16-3AOR	16-3 BLACK RUBBER CORD
10	1	ST-12-10-NY	SPADE TERMINAL 10-12 GA YELLOW
11	1	BC2000	PVC BOX

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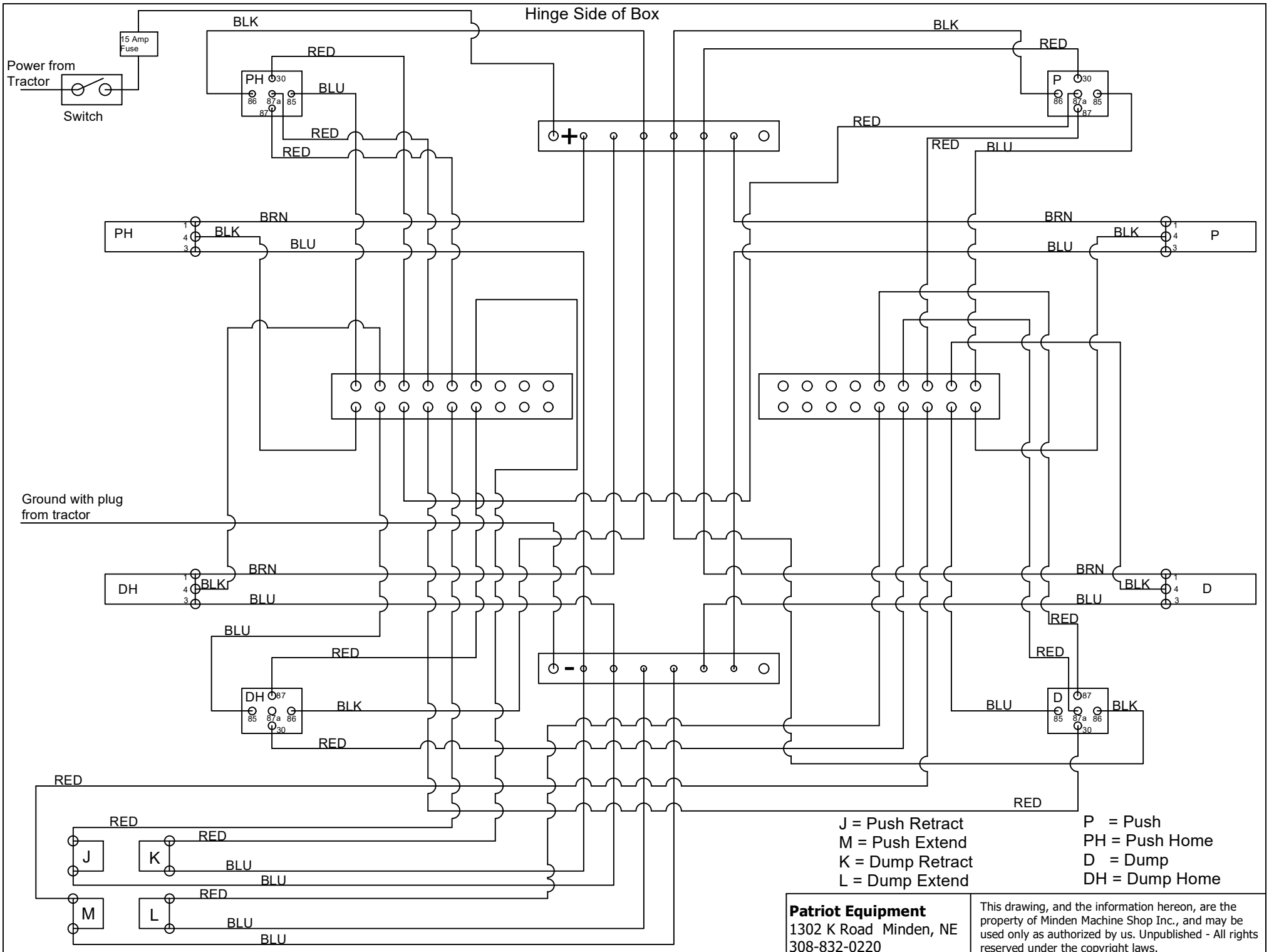
Bale Caddie Electrical with Proximity Switches

The following electrical schematic is for the Bale Caddie 1243 model which uses inductive proximity sensors and relays instead of the wobble switches. Please note the electrical schematic has “Hinge Side of Box” on the schematic. The notation is to assist in the orientation of the circuits within the housing box to aid in troubleshooting and part replacement.

Part numbers:

OCN1-1808N-BRL4 – Inductive Proximity Sensor (18mm diameter, NPN, NC, 8mm range)
R-FS4TZ-P665 – M12 PUR Cable 4 pin
Or
PNK6-CN-3H – Inductive Proximity Sensor (18mm x 45mm body, NPN, NC, 8mm range)
EVT221 – M12 Female, 4 pin cable, 16.4 ft. long, Orange, PVC Jacket

5ZMUO – Relay
5ZMU8 – Relay Base



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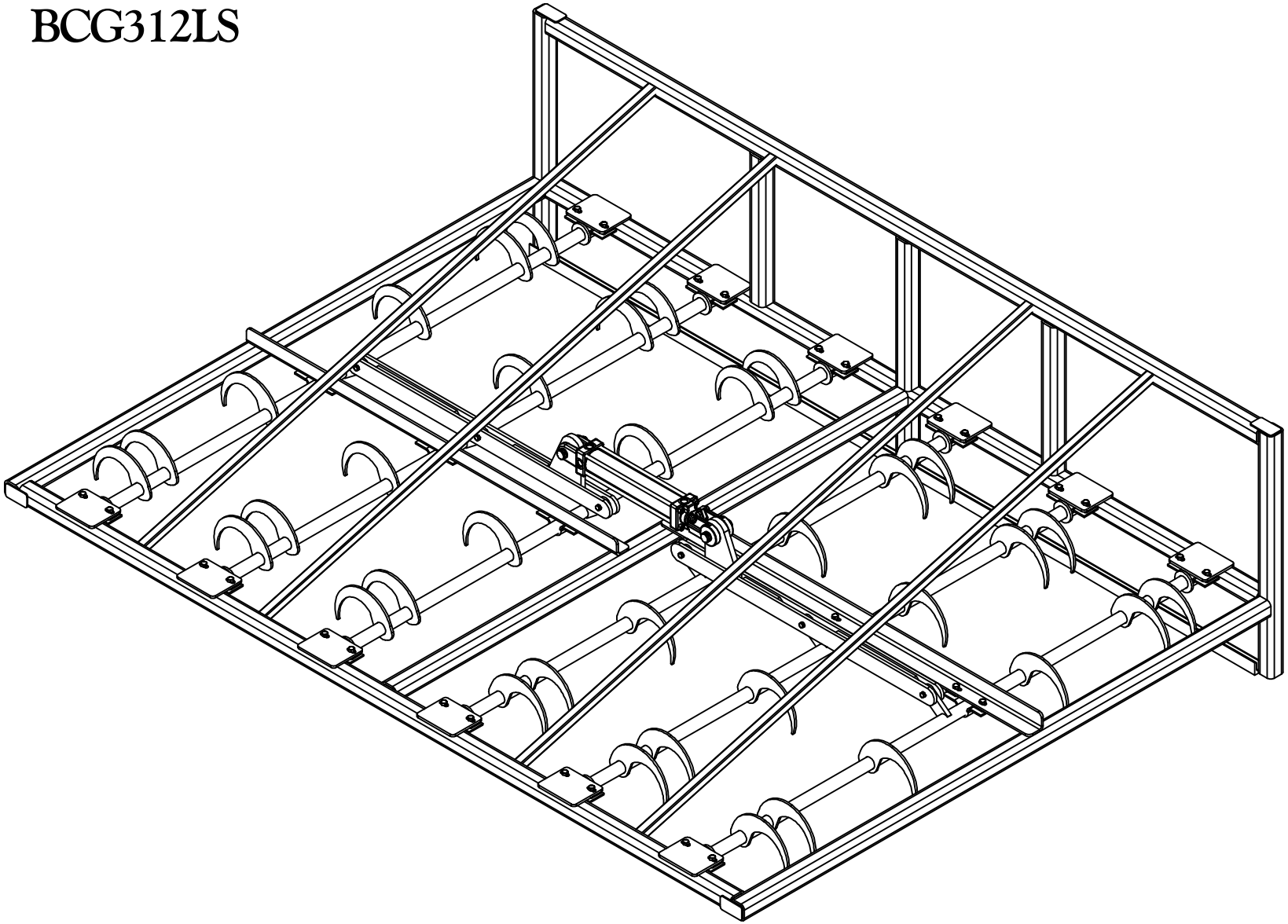
Parts Diagrams

Bale Grabber (Long Side)
BCG312LS



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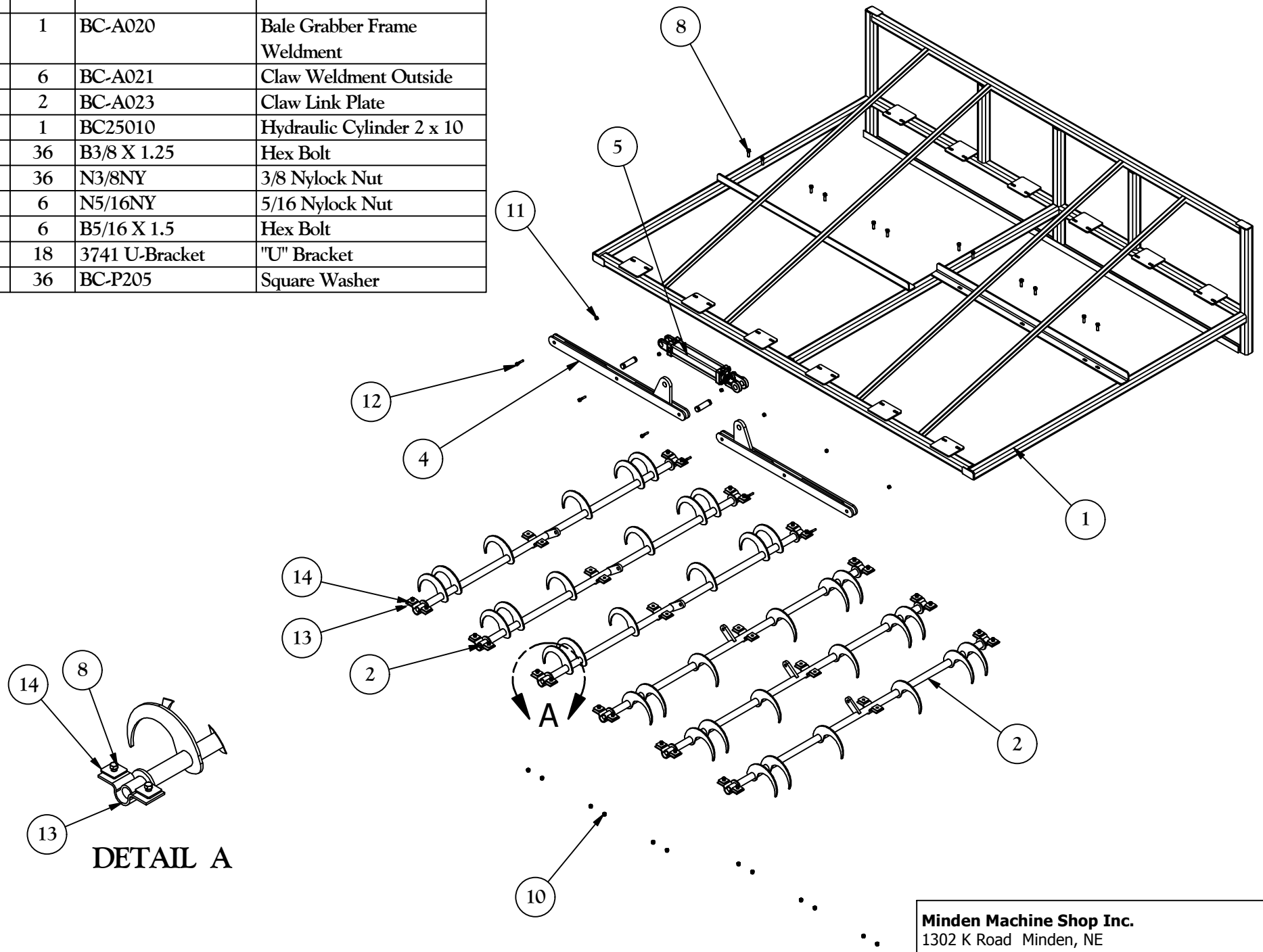
BCG312LS Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	BC-A020	Bale Grabber Frame Weldment
2	6	BC-A021	Claw Weldment Outside
4	2	BC-A023	Claw Link Plate
5	1	BC25010	Hydraulic Cylinder 2 x 10
8	36	B3/8 X 1.25	Hex Bolt
10	36	N3/8NY	3/8 Nylock Nut
11	6	N5/16NY	5/16 Nylock Nut
12	6	B5/16 X 1.5	Hex Bolt
13	18	3741 U-Bracket	"U" Bracket
14	36	BC-P205	Square Washer



DETAIL A

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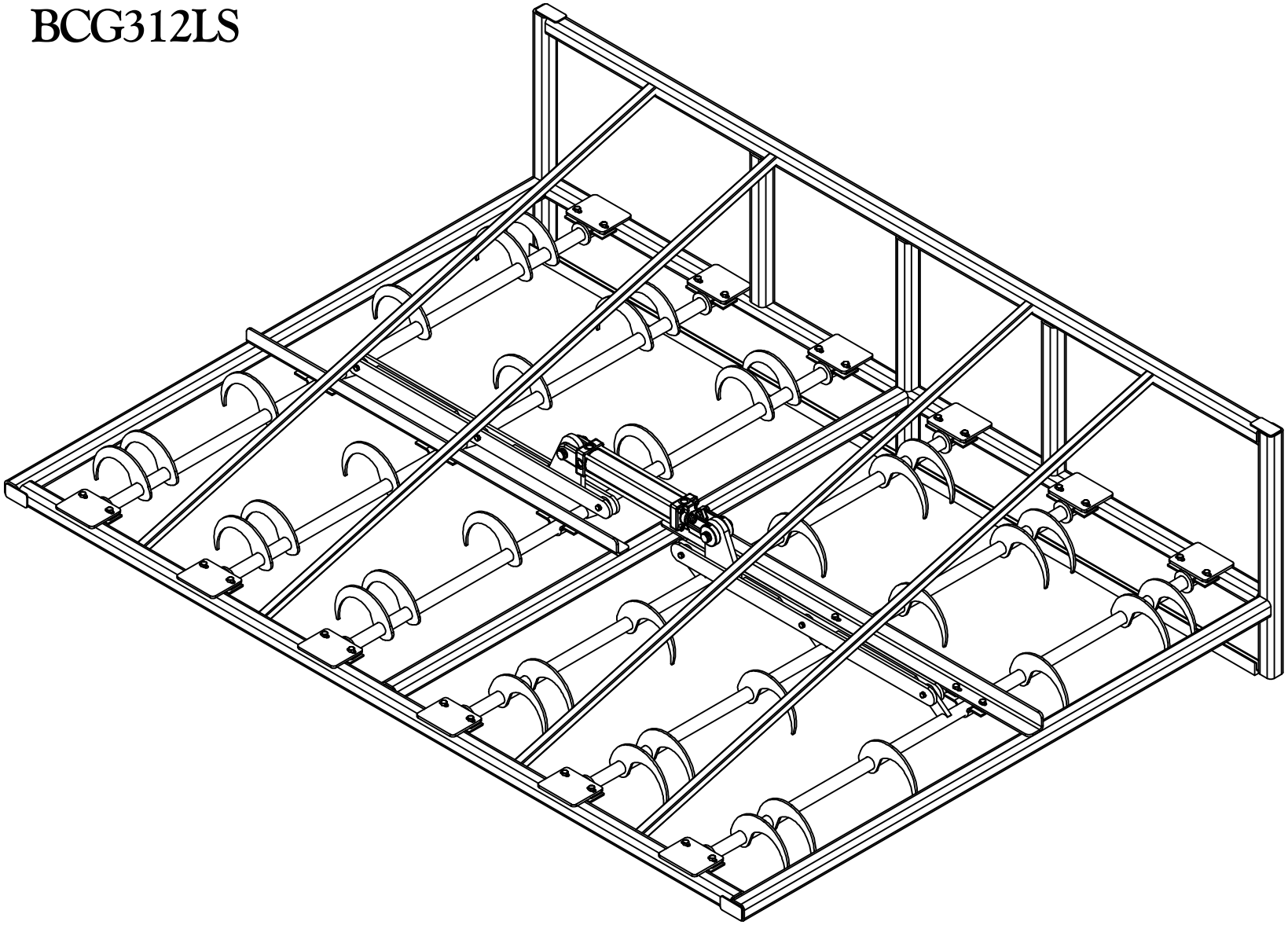
Bale Grabber (Long Side)
BCG312LS



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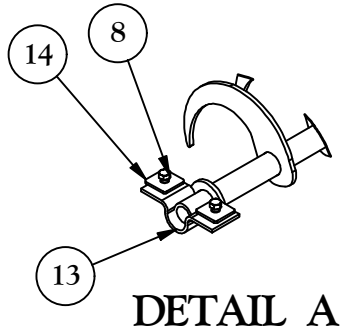
BCG312LS Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	BC-A020	Bale Grabber Frame Weldment
2	6	BC-A021	Claw Weldment Outside
4	2	BC-A023	Claw Link Plate
5	1	BC25010	Hydraulic Cylinder 2 x 10
8	36	B3/8 X 1.25	Hex Bolt
10	36	N3/8NY	3/8 Nylock Nut
11	6	N5/16NY	5/16 Nylock Nut
12	6	B5/16 X 1.5	Hex Bolt
13	18	3741 U-Bracket	"U" Bracket
14	36	BC-P205	Square Washer



DETAIL A

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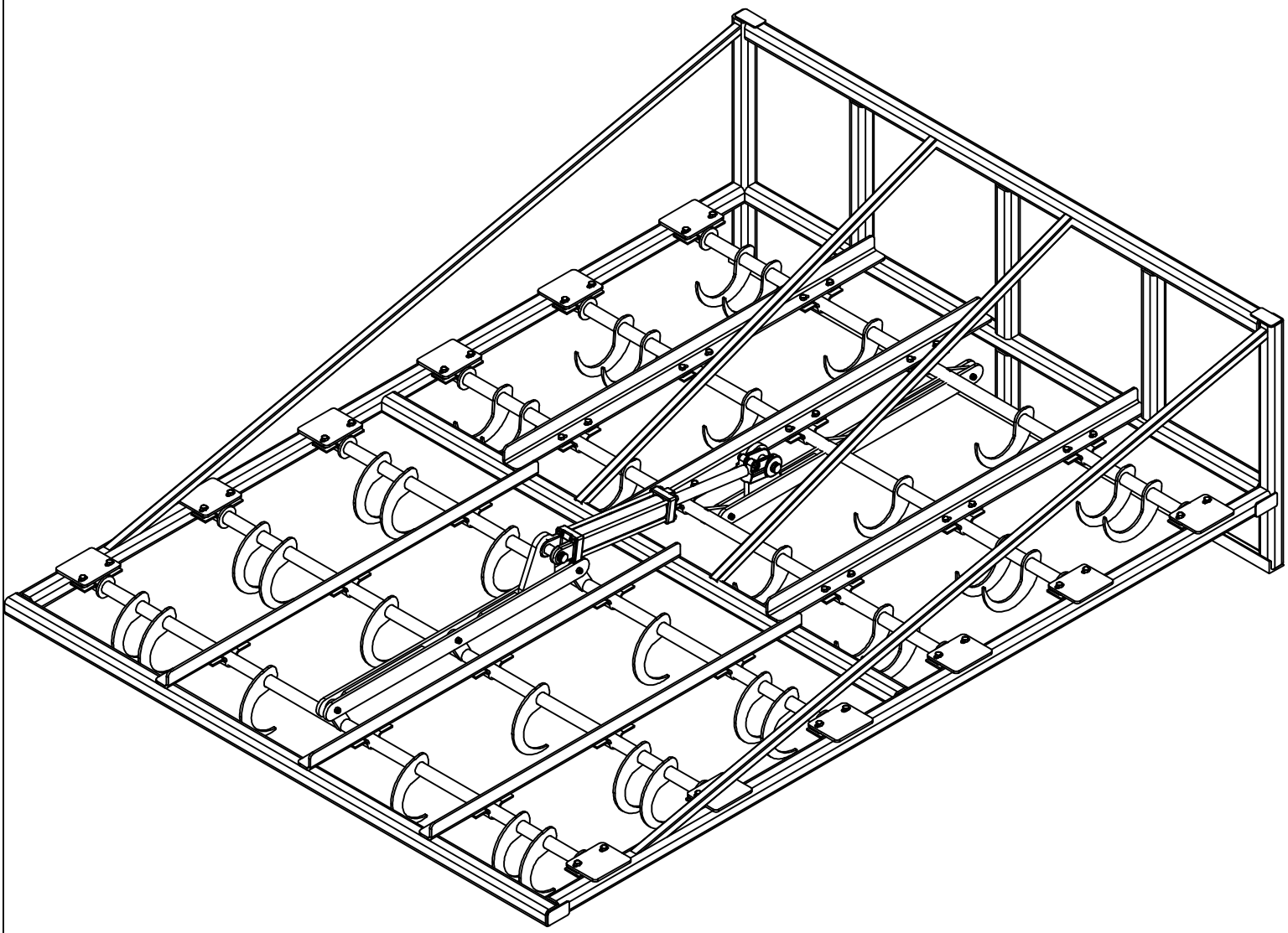
Bale Grabber (Short Side)
BCG312SS



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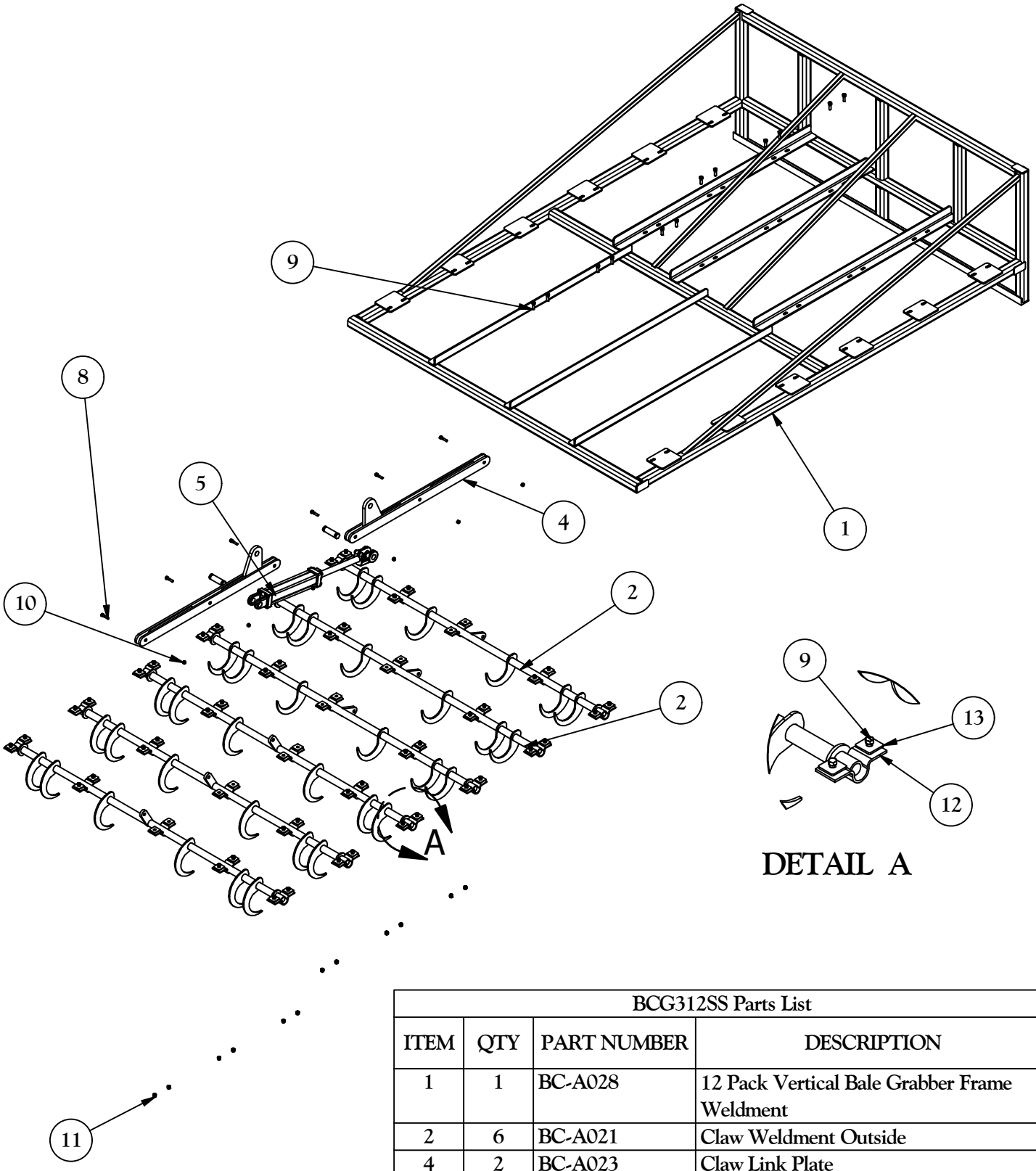

BCG312SS Parts List			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	BC-A028	12 Pack Vertical Bale Grabber Frame Weldment
2	6	BC-A021	Claw Weldment Outside
4	2	BC-A023	Claw Link Plate
5	1	BC25010	Hydraulic Cylinder 2 x 10
8	6	B5/16 X 1.5	Hex Bolt
9	60	B3/8 X 1.25	Hex Bolt
10	6	N5/16NY	5/16 Nylock Nut
11	60	N3/8NY	3/8 Nylock Nut
12	30	3741 U-Bracket	"U" Bracket
13	60	BC-P205	Square Washer

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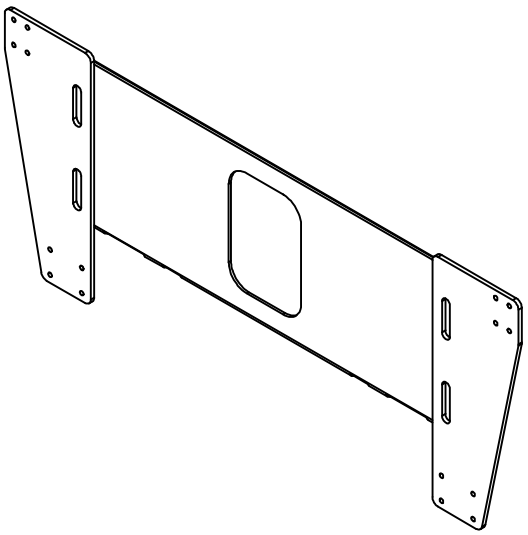
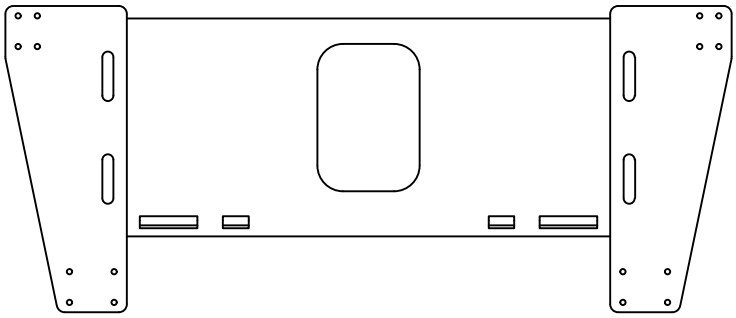
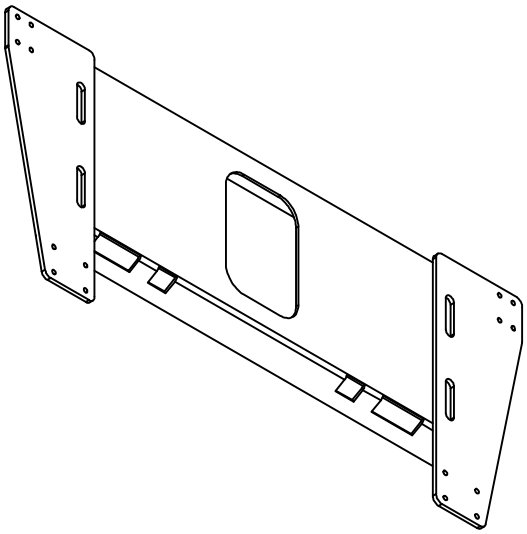
Skid Steer Attachment
BC-A025







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Minden Machine Shop Inc
LIMITED WARRANTY

Minden Machine Shop Inc warrants all products manufactured by it to be free of defect in material and workmanship for a period of one (1) year from the date of purchase.

This Minden Machine Shop Inc. warranty does not cover:

1. Parts and accessories supplied by Minden Machine Shop Inc. but manufactured by others. Minden Machine Shop Inc. will facilitate the other manufacturer warranty for the benefit of the purchaser but will not be bound thereby (example: augers, motors, trailers, tanks, etc.).
2. Products that have been altered by anyone other than a Minden Machine Shop Inc. employee or are used by the purchaser, for purposes other than what was intended at time of manufacture or used in excess of the "built specifications".
3. Products that are custom manufactured by Minden Machine Shop Inc. utilizing the purchaser's design which deviates from Minden Machine Shop Inc. normal production line manufactured or customized features of the products.
4. Malfunctions or damages to the product from misuse, negligence, customer alteration, accidents or product abuse due to incoming material or poor material flow ability or lack of required performance or required maintenance (e.g., poor material flow ability caused by incoming wet fertilizer or hot soybean meal, etc).
5. Loss of time, inconvenience, loss of material, down time or any other consequential damage.
6. Product use for a function that is different than designed intent (e.g., storing soybean meal in grain bin, unacceptable material in the bin such as hot bean meal when product originally designed for other application, etc).
7. Minden Machine Shop Inc is not responsible for any equipment that this product is attached to or mounted on.

To activate this warranty, the purchaser must make contact in writing with Minden Machine Shop Inc. with in one (1) year of date of purchase. After contact, Minden Machine Shop Inc. has the right to determine the cause and qualify the legitimacy of the claim. Minden Machine Shop Inc., upon acceptance of a warranty claim, shall have a reasonable time to plan any repair or replacement and may affect repair or replacement out of its factory or through contract with a local repair service. If a purchaser after warranty notice is made, chooses to make the repair itself, Minden Machine Shop Inc. must approve any expenses before they are incurred to be responsible for customer reimbursement. Minden Machine Shop Inc. shall be liable on a warranty claim for repair or replacement of any defective products and this is the purchaser's sole and exclusive remedy. Minden Machine Shop Inc. will not be liable for any other or further remedy including claims for personal injury, property damage or consequential damage. The law of the Sate of Nebraska shall govern and any such claim and any issues with regard to the same shall be resolved in the Nebraska District Court for the county of Kearney.

RETURN OF MERCHANDISE

Merchandise may not be returned without written approval from the factory. All returns must have a return authorization number. Obtain this number before the return and show it on all return items. A 15% restocking charge is made on merchandise returned. Returned merchandise must be shipped pre-paid.

RECEIVING MERCHANDISE AND FILING CLAIMS

When receiving merchandise it is important to check both the number of parts and their description with packing slip. The consignee must make all claims for freight damage or shortage within 10 days from the date of delivery.

When the material leaves the factory it becomes the property of the consignee. It is the responsibility of the consignee to file a claim on any possible damage or loss. Please list your preferred routing on purchase orders.

MODIFICATIONS

It is the policy of Minden Machine Shop Inc. to improve its products whenever possible and practical to do so. We reserve the right to make changes, improvements and modifications at any time without incurring the obligation to make such changes, improvements and modifications on any equipment sold previously.

WARRANTY REGISTRATION

To register equipment, or file a claim, copy and paste the words on this page into an email or word document, fill out the appropriate information completely, and email it to larry@mindenmachine.com with the subject as EQUIPMENT WARRANTY, or fill it out and fax it to 308-832-1340.

Dealer Information: Not Applicable, check here: [ ]
Dealer Name:
Address:
City:
State:
Zip Code:
Phone #:
Email:

End User Information:
Purchaser:
Address:
City:
State:
Zip Code:
Phone #:
Email:

Equipment:
Serial #:
Date Of Purchase: / /

Equipment:
Trailer Model Number:
Trailer VIN Number:
Date Of Purchase: / /
Dealer Name:

TIRE IDENTIFICATION NUMBERS

QTY	1	2	3	4	5	6	7	8	9	10	11	12
1												
2												
3												
4												
5												
6												
7												
8												

Please return within 14 days of purchase

CLAIM FILE

Defect: