



GRAIN BAG STORAGE SYSTEMS

GBL12A and GBL12C Grain Bag Loader

**Owner's Manual and Parts Book
(Originating w/Serial Number 69-175)**



Model Number: _____
Serial Number: _____
Date of Purchase: _____



LOFTNESS SPECIALIZED EQUIPMENT, INC.

LIMITED WARRANTY POLICY

The limited warranty policy begins upon delivery of the unit to the original customer.

The following Loftness products have a two (2) year limited warranty;

XLB10 Grain Bag Loader, Battle Ax L-series Skid Steer, Battle Ax S-series Skid Steer, Battle Ax H-series Skid Steer, Battle Ax Excavator 20-series, Battle Ax Excavator 30-series, Battle Ax Excavator 40-series, Battle Ax Excavator 50-series, Battle Ax Extreme, Bad Ax Skid Steer, Timber Ax Skid Steer, Stump Ax, BT20, Kwik Cut.

All other Loftness products have a one (1) year limited warranty.

If any Loftness product is used as rental or leased equipment the limited warranty period is for only 30 days from the delivery date to the original customers.

Loftness Specialized Equipment, Inc. ("LOFTNESS") warrants new LOFTNESS machinery and/or attachments at the time of delivery to the original purchaser, to be free from defects in material and workmanship when properly set up and operated in accordance with the recommendations set forth in the LOFTNESS Operator's Manual. The second year of limited warranty includes only parts, and not labor.

LOFTNESS' liability for any defect with respect to accepted goods shall be limited to repairing the goods at an authorized dealer or other LOFTNESS designated location, or replacing them as LOFTNESS shall elect. The above shall be in accordance with LOFTNESS warranty adjustment policies.

WARRANTY REQUIREMENTS

Warranty registration form must be filled out and returned to Loftness Specialized Equipment to validate all warranty claims.

To request a warranty claim, a return authorization from LOFTNESS must be obtained. The failed part may then be returned in an untampered status. This warranty does not include freight or delivery charges incurred when returning machinery for servicing. Dealer mileage, service calls and pick-up/delivery charges are the customer's responsibility.

LIMITATIONS OF WARRANTY

LOFTNESS products are designed to provide years of dependable service when proper use and maintenance is adhered to. The potential for misuse in many applications exists; therefore, a limited warranty is provided as follows.

This warranty shall not apply to any machine or attachment which shall have been repaired or altered outside the LOFTNESS factory or authorized LOFTNESS dealership or in any way so as in LOFTNESS' judgment, to affect its stability or reliability, nor which has been subject to misuse, negligence or accident, nor to any machine or attachment which shall not have been operated in accordance with LOFTNESS' printed instructions or beyond the company recommended machine rated capacity. LOFTNESS may elect to have an area representative evaluate the condition of the machine before warranty is considered.

In addition, this limited warranty provides no coverage for general wear or maintenance items, misuse, environmental conditions and/or contamination for which they were not designed or not intended, including but not limited to the following items;

Use of machine beyond its rated capacity, Conveyors, Improper knife replacement, Auger wear, Missing knives, Saw blades, Striking foreign objects, Brakes and brake pads, Lack of lubrication, Tires, Failures caused by running in an "out-of-balance" condition, Hydraulic hoses damaged by being caught in "pinch points" or by moving parts, and Damage caused by excessive force from the power unit.

EXCLUSIONS OF WARRANTY

Except as otherwise expressly stated herein, LOFTNESS makes no representation or warranty of any kind, expressed or implied. **The implied warranty of merchantability and fitness for a particular purpose are disclaimed, and excluded from this limited warranty.** The remedies set forth in this warranty are the sole and exclusive remedies available to any person under this warranty. LOFTNESS shall have no liability to any person for incidental, consequential or special damages of any description, whether arising out of express or implied warranty or any other contract, negligence, or other tort or otherwise. This exclusion of consequential, incidental and special damages is independent from and shall survive any finding that the exclusive remedy failed of its essential purpose. Upon purchase, the buyer assumes all liability, all personal injury and property damage resulting from the handling, possession or use of the goods by the buyer.

No agent, employee or representative of LOFTNESS has any authority to bind LOFTNESS to any affirmation, representation or warranty concerning its machinery and/or attachments except as specifically set forth herein. (October 2025)





To the Dealer:

In order to ensure that your customer's unit will provide many years of trouble free service, please ensure that the following Pre-Delivery Inspection has been done. Refer to manual for specifications.

PRE-DELIVERY INSPECTION

- ___ All fasteners are tight.
- ___ Grease PTO shaft (u-joints and slide tube).
- ___ Grease all grease zerks.
- ___ PTO shields in place and rotate freely.
- ___ Driveshaft key stock installed and secure.
- ___ Bearing locking collar set screws are tight.
- ___ Set screws on the drive sprockets are tight.
- ___ Drive chain tensioned correctly (1/8" to 1/4" deflection).
- ___ Gearbox oil level(s) are checked to manual specifications.
- ___ Wheel nuts are tight, 6 bolt hub (100 FT-LB), 8 bolt hub (135 FT-LB).
- ___ Axle cylinder stop is with the machine.
- ___ Clean out covers in place and secure.
- ___ All safety decals in place and legible.
- ___ All safety lights work.
- ___ Paint scratches touched up.

Model specific

- ___ Bag roller pivots freely and locks easily (GBU10, GBU12).
- ___ Hopper and swing auger u-joints greased (GBA, XBA, GBL12).
- ___ Electric / Hydraulic winch operates (all except GBU10).
- ___ Brake wheel turns freely, brakes bled, 1000 PSI maximum brake setting (GBL10, XLB10, GBL12).
- ___ Check hydraulic tank level, centered in gauge (GBU12).

Run In

- ___ Hydraulic pressure checked for leaks and operation of all functions of unit.
- ___ PTO shaft operates correctly.

Approximate set up time per unit

GBU10: 3 hours	XLB10: 6 hours	GBL12: 12 hours
GBL10: 4 hours	XLB10, XBA: 12 hours	GBL12C: 8 hours
GBL10, GBA: 8 hours	GBU12: 4 hours	BB10-300: 2 hours

To the Customer

Use this manual as your first source of information about the machine. If you follow the instructions in the manual, your Grain Bag equipment will perform at its optimum for many years.

The photos and line drawings used in this manual are of a production unit, but due to our program of continuous improvement, your machine may vary slightly from the one shown. We reserve the right to make changes and improvements at any time.



Table of Contents

Warranty

Table of Contents

Introduction

Owner Information.....	1
Warranty Policy	1
Serial Number Location.....	1
Manual Storage.....	1

Safety Instructions

Safety First	3
Owner's Responsibility	3
Safety Rules	4
Operating Safety	4
Transporting Safety	4
Maintenance Safety.....	5
Hydraulic Safety	5
PTO Safety	5
Safety Decal Locations	6
Machine Decals and Signs	10
GBL12 Identification	12
GBL12C Identification	13

Set-up Instructions

Site Preparation.....	15
Grain Bag Placement	15
Storing Grain Bags In The Field.....	16
Grain Bag Spacing	16
Storing Grain Bags In Depots	17
Initial Set-up	18
Main Auger Installation	18
Swing Tube/Spout Assembly (GBL12 only).....	21
Mounting The Swing Auger (GBL12 only)	22
Swing Auger Installation (GBL12 only)	22
Swing Hopper/Tube Assembly (GBL12 only)	23
Transition Cover Installation (GBL12 only).....	24
Swing Hopper Assembly (GBL12 only)	24
Swing Hopper Hoist Installation (GBL12 only)	25
Main Hopper Assembly	26
Main Hopper Installation	31
Beam/Trolley Installation	32
Connecting the Grain Bag Loader.....	33
Installing The Grain Bag	35
Transmitter Identification	35
Procedure	35

Table of Contents

Set-up Instructions (Cont'd)

Grain Bag Loader Positioning	38
Procedure	38
Truck Position	39
Swing Auger/Hopper Position	40
Rear Compartment Bagging Position	41
Front Compartment Bagging Position	42

Operating Instructions

Getting Started	43
Sealing The Grain Bag	43
Filling The Grain Bag	44
Adjusting The Bag Pan Height	44
Adjusting Brake Pressure	44
Lowering The Swing Auger (GBL12 only)	45
Swing Hopper Controls (GBL12 only)	47
Loading The Grain Bag (GBL12 only)	48
End of Bag Loading	49
Releasing Brake Pressure	49
Sealing The Grain Bag	49
Switching to Transport Position	50
Procedure	50

Maintenance

General Maintenance	51
Maintenance Schedule	51
Fluids And Lubricants	51
Lubrication	52
Grease Points	52
Oil Points	55
Transport Wheel Hub	55
Checking Gear Lube	55
Adding Gear Lube	55
Gearbox	56
Checking Gearbox Oil Levels	56
Lower Gearbox (GBL12 only)	56
Upper Gearbox (GBL12 only)	57
Main Auger Helical Gearbox	57
Flushing The Main Auger Helical Gearbox	57
Swing Hopper Drive Chain (GBL12 only)	58
Checking Drive Chain Tension (GBL12 only)	58
Adjusting Drive Chain Tension (GBL12 only)	58

Table of Contents

Maintenance (Cont'd)

Disc Brakes	59
Removing The Brake Pads And Calipers	59
Installing The Calipers And Brake Shoes	60
Bleeding The Brake System	61
Troubleshooting	64

Parts Identification

Base Assembly - GBL12 and GBL12C	70
Base Assembly (Cont'd) - GBL12 and GBL12C	71
Base Assembly (Cont'd) - GBL12 and GBL12C	72
Base Assembly, Bag Pan and Flap (Cont'd) - GBL12 and GBL12C	74
Bag Pan Assembly (N27684) - GBL12 and GBL12C	76
Base Assembly (Cont'd) - GBL12 and GBL12C	78
Bag Lift Cradle (N33583) - GBL12 and GBL12C	80
Bungy Assembly (N37358) - GBL12 and GBL12C	81
Auger Body Sleeve (N30629) - GBL12 and GBL12C	82
Crane Assembly (N40131) - GBL12 and GBL12C	83
Beam Winch Trolley Lift Assembly (N27680) - GBL12 and GBL12C	84
GBL12 Front Frame Assembly - GBL12 only	86
GBL12 Front Frame Hitch Assembly - GBL12 only	87
GBL12 Front Frame Hitch Assembly (Cont'd) - GBL12 only	88
Front Frame Assembly - GBL12 only	92
Split Auger (N29551) - GBL12 only	93
Front Boot Assembly - GBL12 only	94
Auger Hanger Mount (N29566) - GBL12 only	96
Swing Auger Components (N29114) - GBL12 only	97
Swing Auger Components without Pan (N29230) - GBL12 only	98
GBL12 Hydraulic Diagram - GBL12 only	100
Swing Auger Drive (N27851) - GBL12 only	101
Swing Auger Drive Assembly (N27532) - GBL12 only	101
Swing Auger - GBL12 only	102
Swing Hopper Main Assembly - GBL12 only	104
Swing Hopper Drive - GBL12 only	106
Swing Auger Hopper Lift (N33220) - GBL12 only	108
GBL12C Front Frame Assembly - GBL12C only	110
GBL12C Front Frame Hitch Assembly (N30872) - GBL12C only	111
GBL12C Front Frame Assembly - GBL12C only	112
GBL12C Front Frame Assembly (Cont'd) - GBL12C only	114
20" Front Auger - GBL12C only	116
Hopper with Extension (N30147) - GBL12 and GBL12C	118
Hopper Hardware (N27322) - GBL12 and GBL12C	119
Right Transport Axle Wired (202847) - GBL12 and GBL12C	120
Left Transport Axle Wired (202846) - GBL12 and GBL12C	120
Hub Assembly, Traction/Brake Wheel	121
Hub, 8 Bolt 8" Diameter (N25138) - GBL12 and GBL12C	122

Table of Contents

Parts Identification (Cont'd)

Brake Battery Wired (N30092) - GBL12 and GBL12C	123
Brake Actuator (N27581) - GBL12 and GBL12C	124
Brake Caliper (N22794) - GBL12 and GBL12C	125
Brake Wiring Diagram (N30114) - GBL12 and GBL12C	126
Brake Diagram (N29035) - GBL12 and GBL12C	127
Hydraulic Lift Schematic (N29040) - GBL12 and GBL12C	128
Wiring Diagram (202635) - GBL12 and GBL12C	130
PTO Driveline (N29020) - GBL12 only	132
PTO Driveline (N29021) - GBL12 only	133
PTO Driveline (N30626) - GBL12C only	134
PTO Driveline (N30627) - GBL12C only	135

Appendix

Specifications - GBL12	137
Specifications - GBL12C	137
Dimensions - GBL12	138
Transportation	138
Dimensions - GBL12C	139
Transportation	139
Dimensions (Cont'd)	140
Torque Specifications	141
Inches Hardware and Lock Nuts	141
Metric Hardware and Lock Nuts	142

Owner Information

Thank you for your decision to purchase a Grain Bag Loader (GBL) from Loftness. To ensure maximum performance of your machine, it is mandatory that you thoroughly study the owner's manual and follow the recommendations. Proper operation and maintenance are essential to maximize machine life and prevent personal injury.

NOTE: *This manual provides setup, operation, and maintenance instructions for two Loftness models, the GBL12 and the GBL12C. The instructions provided in this manual apply to both models unless specified by model number.*

Operate and maintain this machine in a safe manner and in accordance with all applicable local, state, and federal codes, regulations and/or laws. Follow all on-product labeling and instructions.

Make sure that all personnel have read this owner's manual and thoroughly understand safe and correct operating, installation and maintenance procedures.

Make sure that all personnel responsible for setting up and preparing the grain bag loader for operation have watched the Set-up DVD (Loftness Part No. N26999) and thoroughly understand how to safely and correctly prepare the machine for operation.

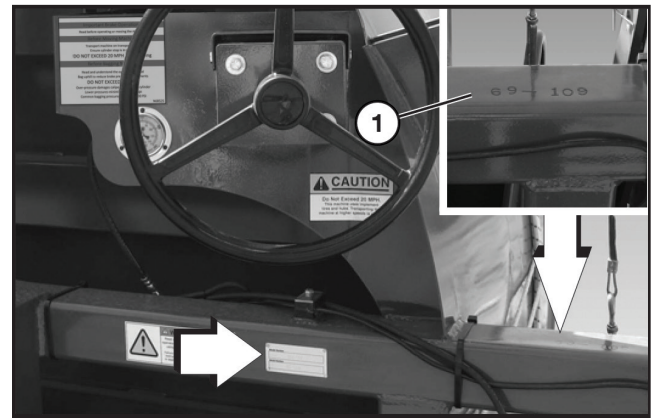
Continuous improvement and advancement of Loftness products may result in changes to your equipment that may not be reflected in this publication. Loftness reserves the right to make product improvements to the machine at any time. Although great care has been taken to ensure the accuracy of this publication, Loftness does not assume any liability for errors or omissions.

Loftness Specialized Equipment, Inc. is not responsible for the condition of the grain when it is being stored in or removed from grain bags loaded or unloaded with Loftness built equipment.

Warranty Policy

Be sure to read and understand the Warranty Policy at the beginning of this manual. It is also important that you fill out the Warranty Registration form(s) completely and return to Loftness so as not to void the warranty.

Serial Number Location



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

NOTE: *The machine's serial number is also stamped in this area (1).*

Manual Storage




Keep the owner's manual and the entire documentation packet in the storage compartment provided on your grain bag loader. The owner's manual must be available for all operators.



Safety First

Accidents can be prevented by recognizing the causes or hazards before an accident occurs and doing something about them. Regardless of the care used in the design and construction of this machine, there are some areas that cannot be safeguarded without interfering with accessibility and efficient operation.

	<h3>Safety Alert Symbol</h3> <p>This message alert symbol identifies important safety messages on the machine and in the owner's manual. When you see this symbol, be alert to the possibility of personal injury and carefully read the message that follows.</p>
---	--

In the owner's manual and on decals used on the machine the words **DANGER, WARNING, CAUTION, IMPORTANT, and NOTE** are used to indicate the following:

DANGER: This word warns of immediate hazards which, if not avoided, will result in severe personal injury or death. The color associated with Danger is RED.



WARNING: This word refers to a potentially hazardous situation which, if not avoided, could result in severe personal injury or death. The color associated with Warning is ORANGE.

CAUTION: This word refers to a potentially hazardous or unsafe situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices. The color associated with Caution is YELLOW.

IMPORTANT: Highlights information that must be heeded.

NOTE: A reminder of other related information that needs to be considered.

If Safety Decals on this machine are ISO two panel pictorial, decals are defined as follows:

- The first panel indicates the nature of the hazard.
- The second panel indicates the appropriate avoidance of the hazard.
- Background color is YELLOW.
- Prohibition symbols such as  and  if used, are RED.

Be certain all machine operators are aware of the dangers indicated by safety decals applied to the machine, and be certain they follow all safety decal instructions. Contact Loftness for safety decal replacement.

Loftness cannot anticipate every possible circumstance that may involve a potential hazard. The warnings in this owner's manual are not all inclusive.

Owner's Responsibility

Operate and maintain this machine in a safe manner and in accordance with all applicable local, state, and federal codes, regulations and/or laws and in compliance with on-product labeling and this owner's manual instructions.

Make sure that all personnel have read this owner's manual, and thoroughly understand safe and correct installation, operation and maintenance procedures.

Make sure the machine is installed correctly before being placed in service. At regular intervals thereafter, the machine should be serviced in accordance with procedures outlined in this owner's manual.

Fulfill all warranty obligations so as not to void the warranties. The warranty policy included in this manual outlines the warranty policy of Loftness.

Safety Instructions

Safety Rules

These are general safety considerations. Additional precautions may be necessary to operate your machine in a safe manner. Be certain you are operating your machine in accordance with all safety codes, OSHA rules and regulations, insurance requirements, local, state and federal laws.

Operating Safety

- Do not allow anyone to operate the machine until he or she has read the owner's manual and is completely familiar with all safety precautions.
- Do not allow inexperienced persons unfamiliar with the machine, or unfamiliar with safe operating and maintenance procedures, to operate or maintain the machine.
- Do not allow persons under the influence of alcohol, medications, or other drugs that can impair judgment or cause drowsiness to operate or maintain the machine.
- Keep children, bystanders and other workers away from the machine while it is operating. No riders allowed.
- The machine requires an operator at all times. Never leave the machine running and unattended.
- Do not wear loose hanging clothes, neckties or jewelry. Long hair is to be placed under a cap or hat. These precautions will help prevent you from becoming caught in any moving parts on the machine.
- Do wear safety glasses, ear protection, respirators, gloves, hard hats, safety shoes and other protective clothing when required.
- The auger should not be used to handle materials other than those which were specified as part of its design. It is the operator's responsibility to be aware of the specifications and operate the auger accordingly.
- It is the operator's responsibility to be aware of machine operation and work area hazards at all times.
- Operators are responsible to know the location and function of all guards and shields including but not limited to PTO drivelines, gearboxes, chain drives, augers and are responsible to make certain that all guards are in place when operating the machine.
- Operators are responsible to be aware of safety hazard areas and follow instructions on warning, caution, or danger decals applied to the machine.
- Know the area before operating the machine. Be aware of power lines or other equipment. Watch for adequate overhead clearance.
- Always have an operator in the tractor while the machine is in operation.
- Remove from the area of operation all foreign objects such as sticks, wire, rocks, etc., that might become tangled in the augers. These articles can damage the machine or might be thrown and strike other objects.
- Disengage PTO, clutch hydraulic valve and shift tractor into neutral or park before starting engine.
- Never operate the machine with a 1000 RPM to 540 RPM adapter.

Transporting Safety

- Disengage PTO, clutch hydraulic valve and shift tractor into neutral or park before starting engine.
- Be sure the transport axle is fully raised and cylinder stops are in place before transporting on a roadway.
- Make sure all lights and electric brake wires are hooked up and working before transporting on a roadway.

Safety Instructions

Maintenance Safety

- Do not allow inexperienced persons unfamiliar with the machine, or unfamiliar with safe operating and maintenance procedures, to operate or maintain the machine.
- Do not allow persons under the influence of alcohol, medications, or other drugs that can impair judgment or cause drowsiness to operate or maintain the machine.
- Make sure the operator's area is clear of any distracting objects. Keep work areas clean and free of grease and oil to avoid slipping or falling.
- Periodically check all guards, shields and structural members. Replace or repair anything that could cause a potential hazard.
- Do not replace components or parts with other than factory-recommended service parts. To do so may decrease the effectiveness of the machine.
- Do not lubricate parts while the machine is running.
- Do not smoke while servicing the machine.
- Never attempt to make any adjustments while the tractor engine is running or the key is in the "ON" position in the tractor. Before leaving the operator's position, disengage power to the machine and remove ignition key.

Hydraulic Safety

- The hydraulic system is under high pressure. Make sure all lines and fittings are tight and in good condition. These fluids escaping under high pressure can have sufficient force to penetrate skin and cause serious injury.
- Never check for leaks by using any part of your body to feel for escaping fluid.
- Always use a piece of wood to check for leaks.

PTO Safety

- Keep all guards and shields in place when operating the PTO. Replace any damaged or missing guards and shields before operating the PTO.
- Keep children, bystanders and other workers away from the machine while it is operating or while the PTO is engaged. No riders allowed.
- Do not wear loose hanging clothes, neckties or jewelry. Long hair is to be placed under a cap or hat. These precautions will help prevent you from becoming caught in any moving parts on the machine.
- Read and understand the tractor operation and maintenance manual regarding safe and proper operation for PTO driven equipment.
- Never step over or crawl around the equipment while the PTO is engaged; entanglement could occur.
- Do not exceed 1000 RPM PTO speed.
- Disengage PTO driveline and place in the stored position when the machine is transported.
- Never use a steel hammer when connecting or disconnecting a PTO shaft.
- Engage and disengage the PTO slowly at idle speed to prevent unnecessary stress to the driveline.
- DO NOT USE PTO ADAPTERS OF ANY KIND.

Use only recommended shearbolts.

Safety Instructions

Safety Decal Locations

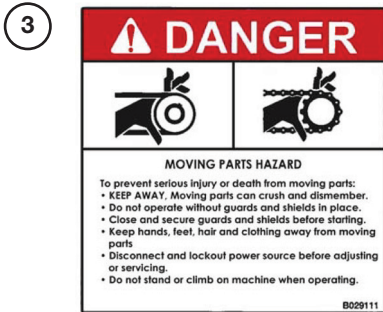
Check and replace any worn, torn, hard to read or missing safety decals on your machine.



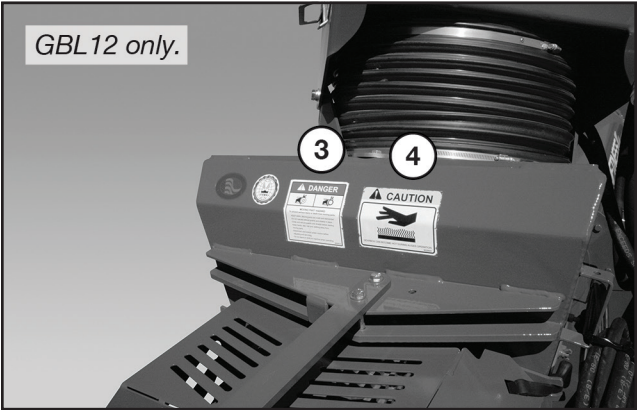
Part No. N26795



Part No. N26796

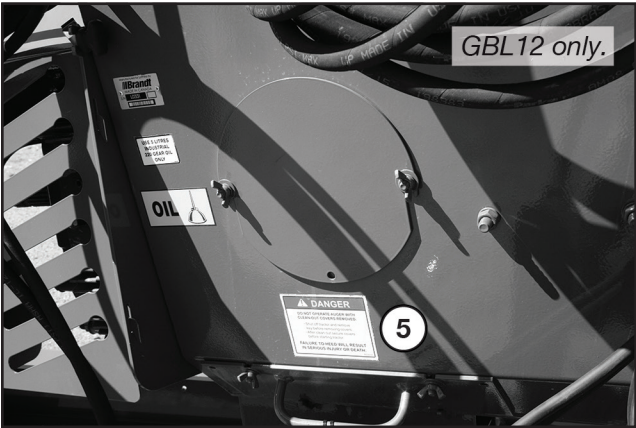


Part No. N26682



Part No. N26683

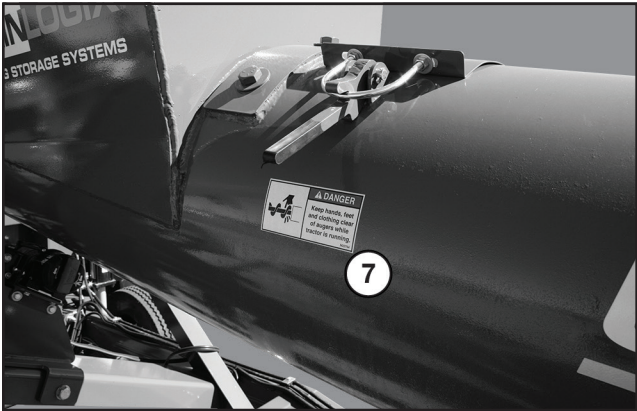
Safety Decal Locations (Cont'd)



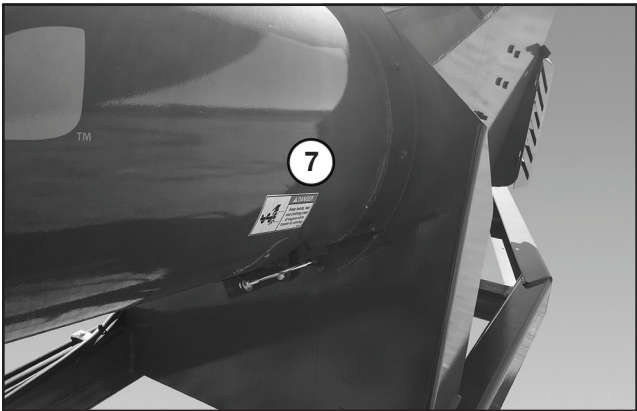
5



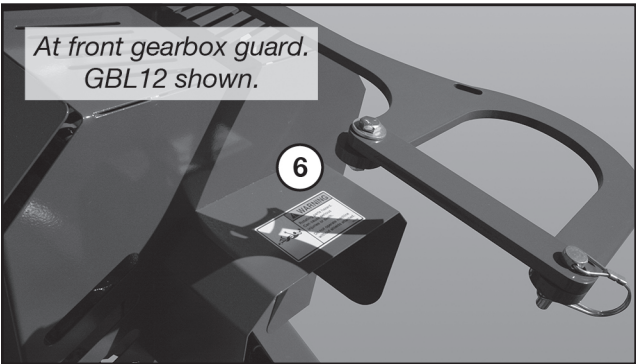
Part No. N26681



7



7



6

6



Part No. 4189

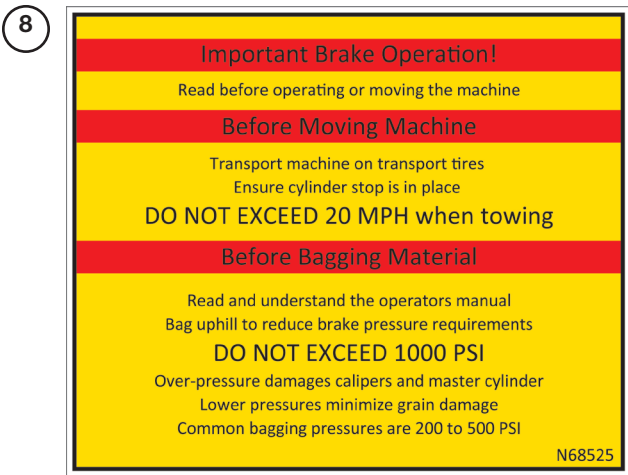
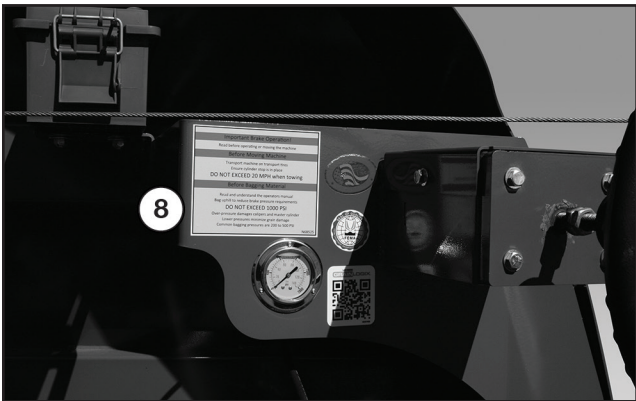
7



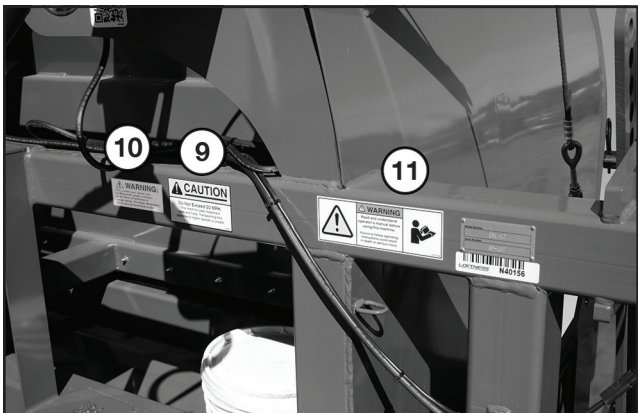
Part No. N22764

Safety Instructions

Safety Decal Locations (Cont'd)



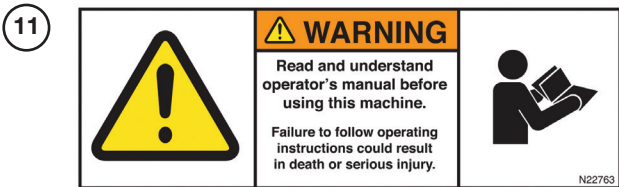
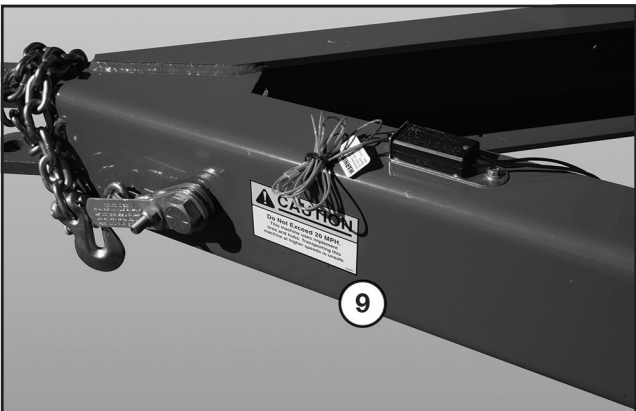
Part No. N68525



Part No. N23931



Part No. 203264

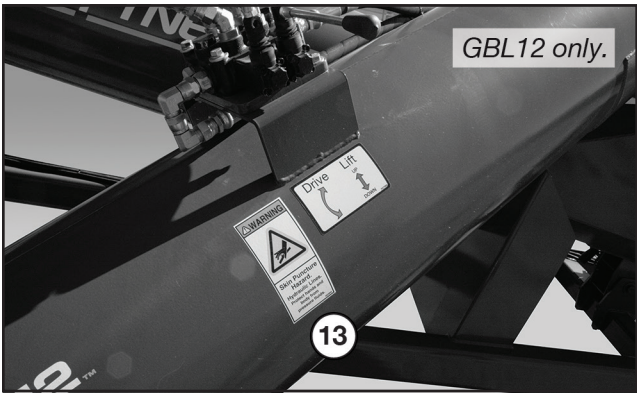


Part No. N22763

Safety Decal Locations (Cont'd)



Part No. N23507



Part No. N23899

Safety Instructions

Machine Decals and Signs

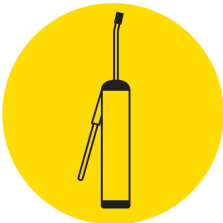
NOTE: All safety related decals are also shown in the Safety Instructions Section along with their location on the machine. See “Safety Decal Locations” starting on page 6.

Check and replace any worn, torn, hard to read or missing decals on your machine.

Part No. 4136



Part No. 4137



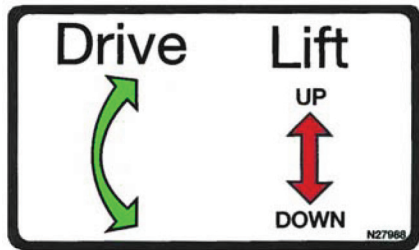
Part No. N28011



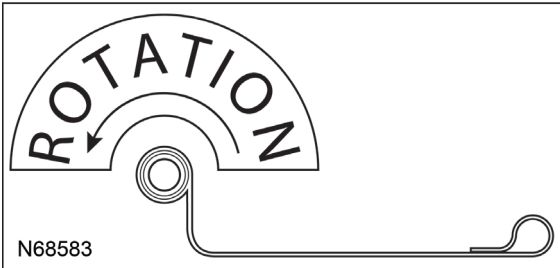
Part No. 4132



Part No. N27988



Part No. N68583



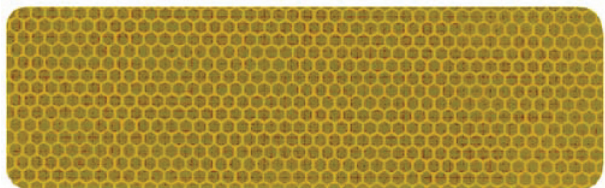
Part No. N27995



Part No. N27996



Part No. 4140



Part No. N26852



Machine Decals and Signs (Cont'd)

Part No. 4138



Part No. N13517



Part No. N26972



Part No. N13721



Part No. N26975



Part No. N26971



Part No. N26977

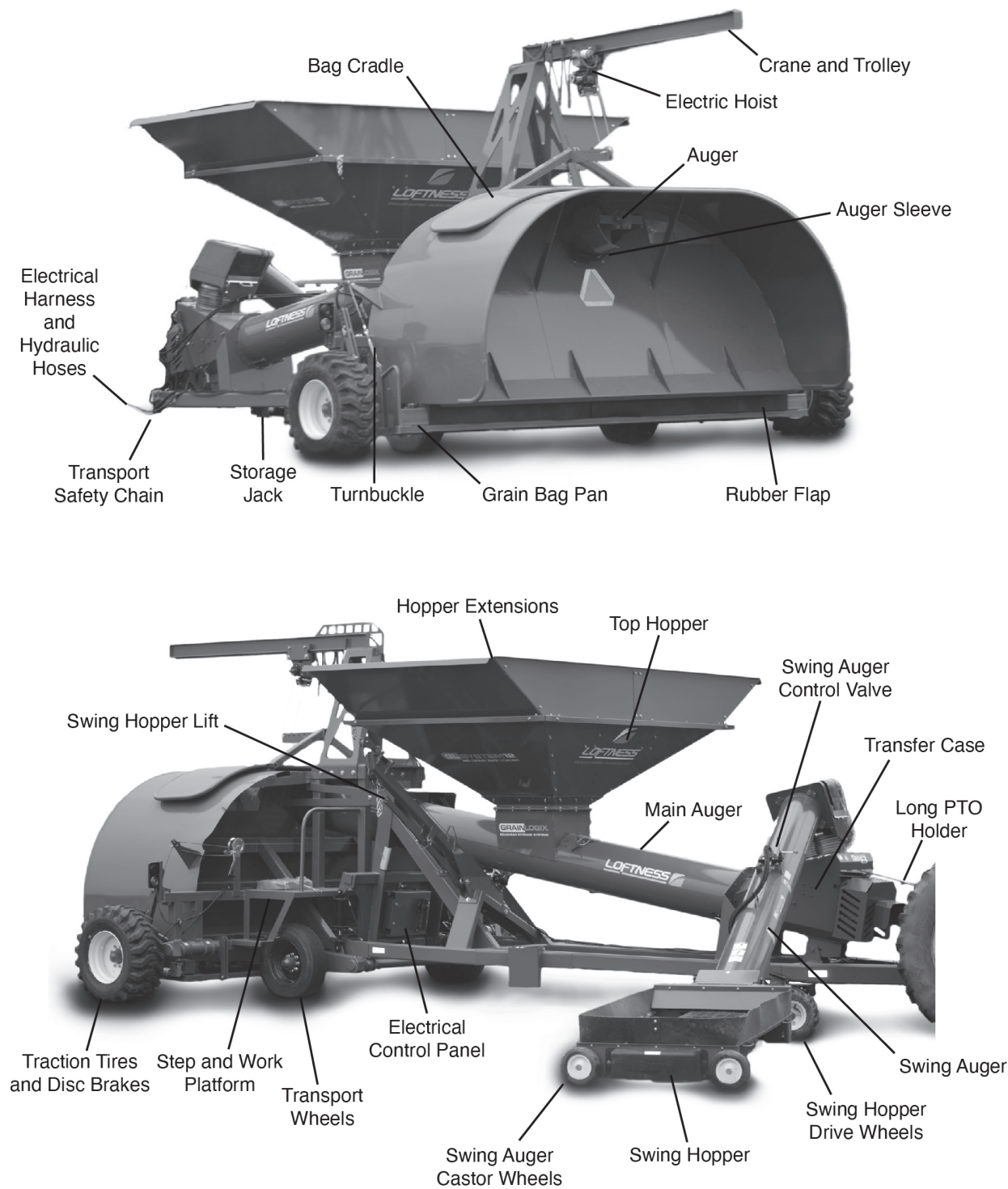


Part No. N26979

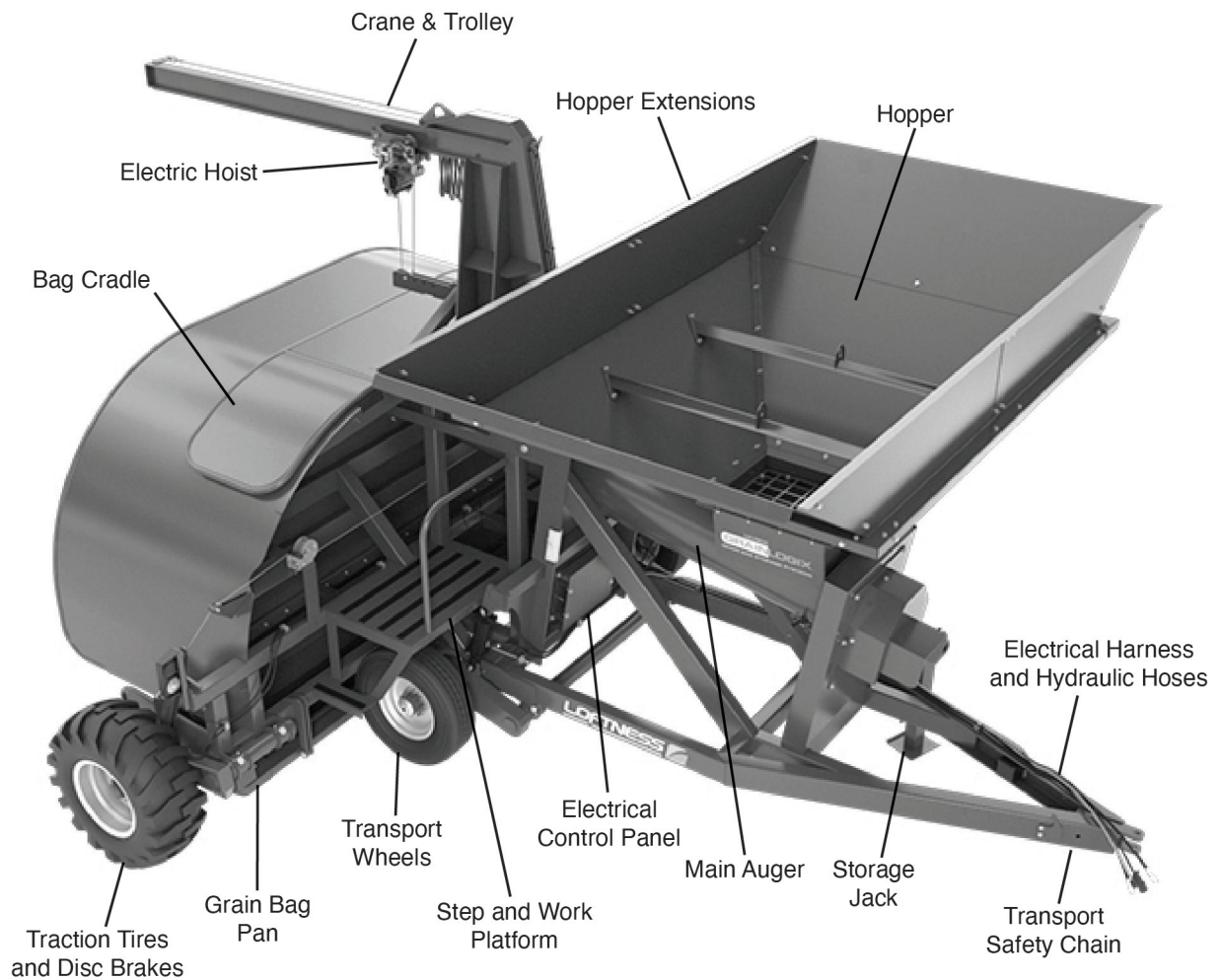


Safety Instructions

GBL12 Identification



GBL12C Identification





Site Preparation

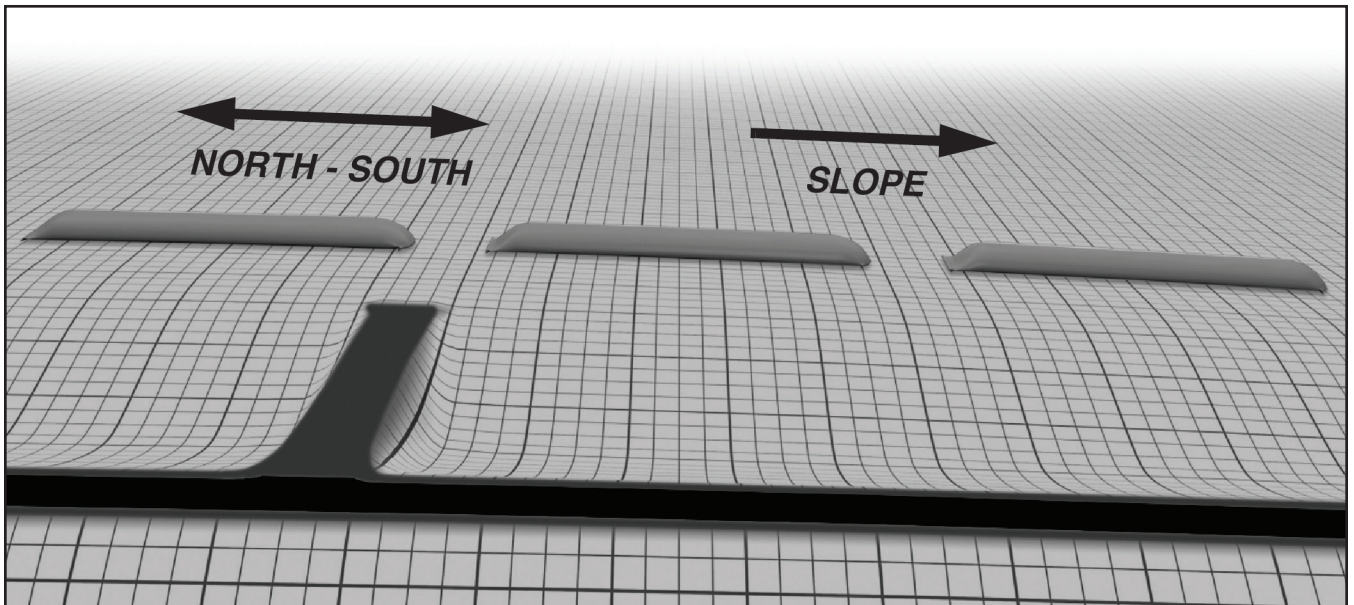
Lightly scrape the ground, removing weeds, sticks, stones and stubble from the entire grain bag storage site that could penetrate the grain bag. When removing debris from the site, be careful not to loosen the ground. The grain bag storage site should remain as firm as possible and free from debris to minimize grain bag damage. Chemical can be sprayed on the site to control weeds and grasses reducing nesting habitat for rodents.

NOTE: *Maximum grade should be limited to grades less than 5%.*

Grain Bag Placement



WARNING: *Do not place grain bags near or under power lines.*



The grain bags should be positioned North-South on the storage site. This will allow the grain bags to be exposed to the sun evenly.

NOTE: *It is recommended that the grain bags be positioned north-south on the storage site. This will allow the grain bags to be exposed to the sun evenly. If the grain bags are positioned east-west the south side of the grain bags will be exposed to the sun the entire day and may damage the grain bags.*

Start the grain bag on the lowest elevation of the storage site. This will aid in the loading of the grain bag and also assist in preventing any moisture from entering the bag both at the starting end and at the finishing end.

NOTE: *It is NOT recommended to position the bag across the slope. Positioning the bag across the slope could cause water build-up along the edge of the bag. This places added stress on one side of the grain bag and may cause the bag to fail. It also prevents water from shedding away from and/or running along the length of the grain bag.*

Set-up Instructions

Grain Bag Placement (Cont'd)

Storing Grain Bags In The Field

When storing grain bags in the field, position the grain bags in a line. This will help prevent animals (rodents and other pests) from using the bags as a shelter from the weather and from natural predators.

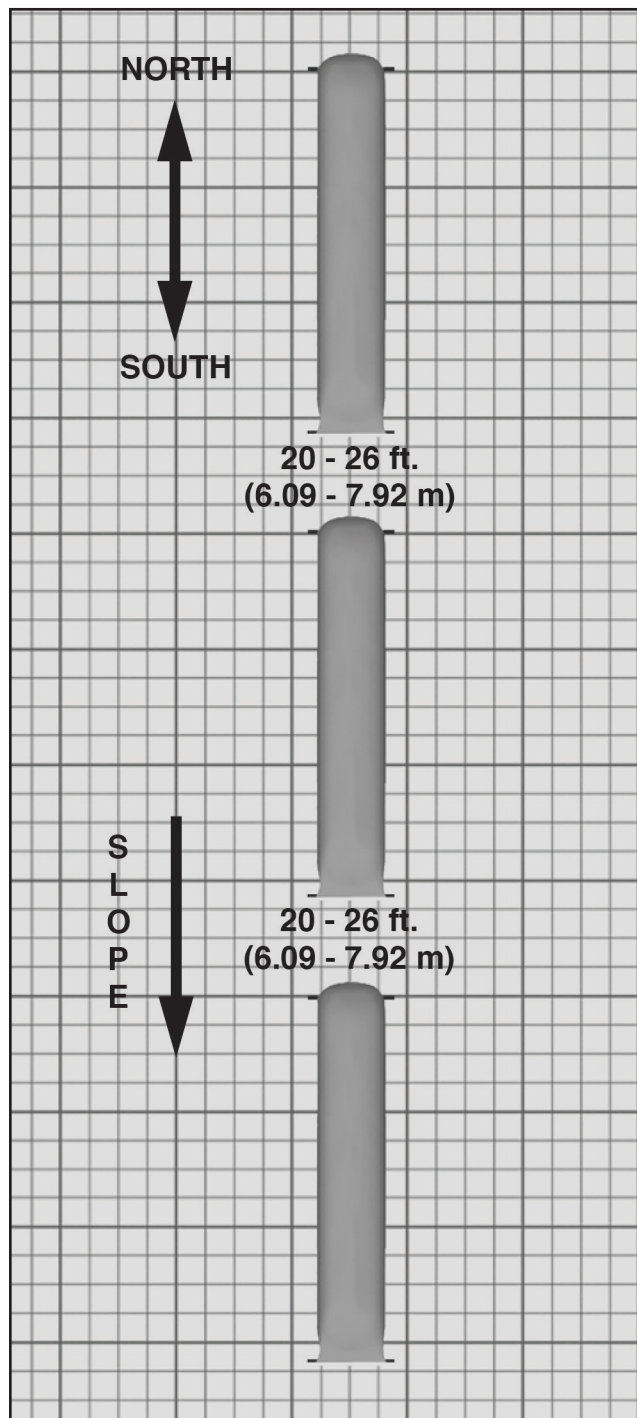
NOTE: *Maintain adequate space (20-26 ft. (6.09-7.92 m) is recommended) between the grain bags for the unloading equipment and transport vehicles to travel between the bags.*

Grain Bag Spacing

When storing grain bags side by side, it is recommended that you space the grain bags a minimum of 18 ft. (5.5 m) apart. This will allow adequate space for the unloading equipment and transport vehicles to travel between the bags during the unloading process.

NOTE: *Unrestricted travel between all grain bags is recommended.*

NOTE: *When bagging on a slope, always bag uphill.*

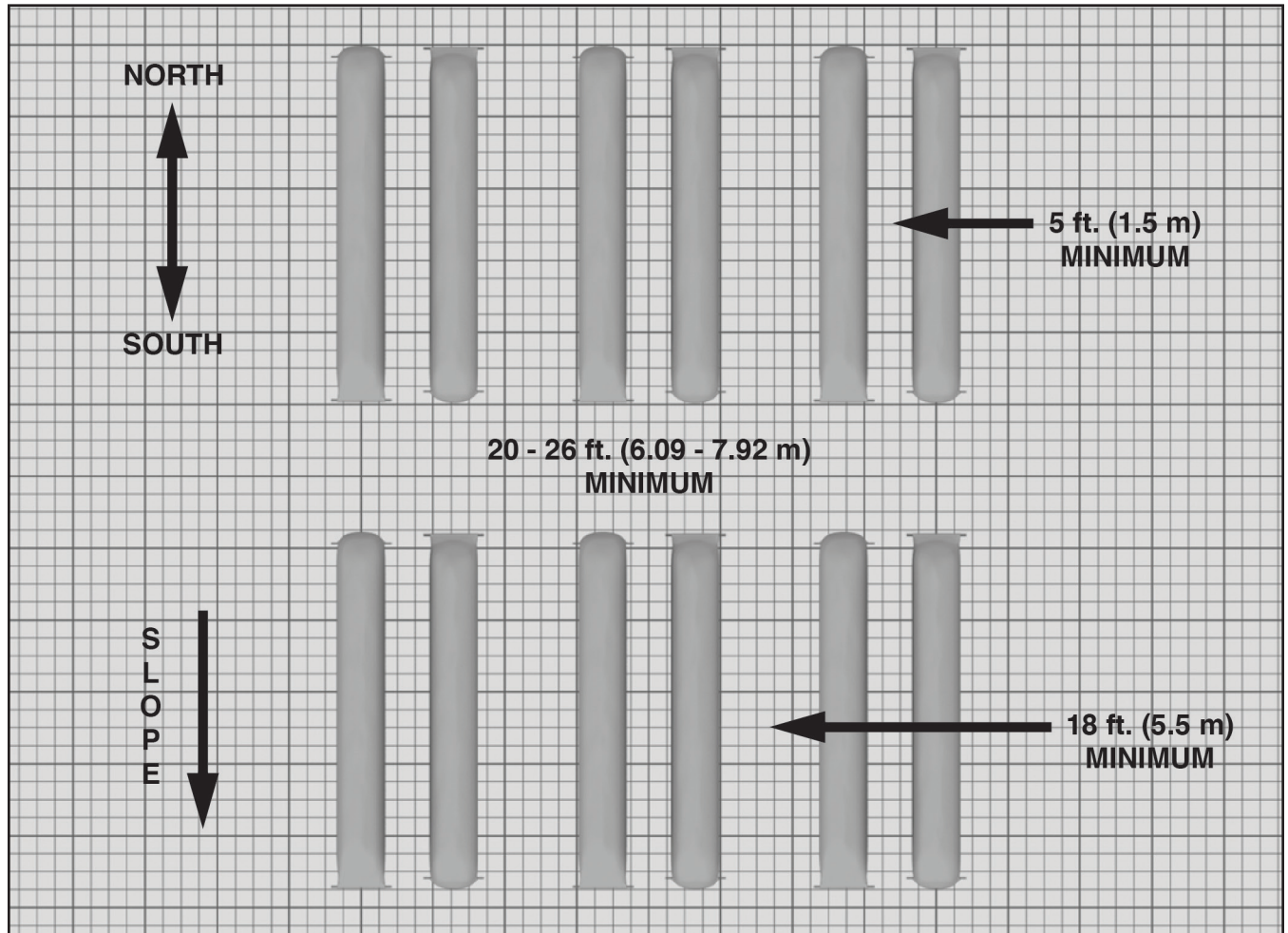


Grain Bag Placement (Cont'd)

Storing Grain Bags In Depots



WARNING: Do Not place grain bags near or under power lines.



When storing grain bags in depots, position the bags in pairs approximately 5 ft. (1.5 m) apart and a minimum of 18 ft. (5.5 m) between pairs. 5 ft. (1.5 m) is adequate space for the Unloader to operate without damaging the adjacent grain bag. Maintaining 18 ft. (5.5 m) spacing between pairs will allow the transport vehicle adequate space to travel.

Load the pair of grain bags opposite from each other. When unloading the grain bags, this will allow the unloading equipment to finish unloading one bag and move directly over and start the unloading of the second bag.

NOTE: If the grain bags need to be positioned end to end with another pair, leave approximately 20-26 ft. (6.1-7.9 m) of space between the two pairs of bags. This should be adequate space for the transport vehicle and Unloader to travel between the pairs of bags.

Set-up Instructions

Initial Set-up

NOTE: Before initial set-up, be sure to also watch the supplied DVD that came with the grain bag loader. It includes detailed instructions that show how to safely and correctly prepare the grain bag loader for operation.

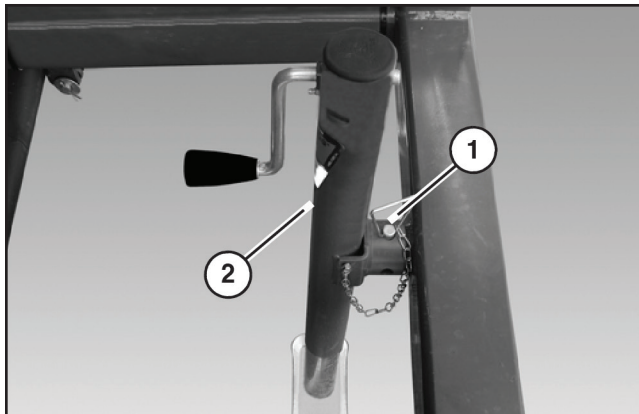
The Grain Bag Loader components (base assembly, main auger assembly, hopper and crane) are shipped individually.

It's recommended to use a forklift when installing the Grain Bag Loader components (base assembly, main auger assembly, hopper and crane assembly).

NOTE: The forklift must be in good condition and of adequate size to lift the Grain Bag Loader components.

NOTE: Use lifting slings/straps that are in good condition and of adequate size to lift the Grain Bag Loader components.

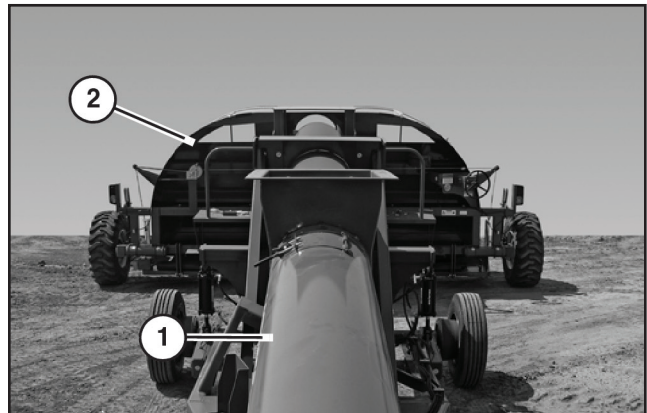
Main Auger Installation



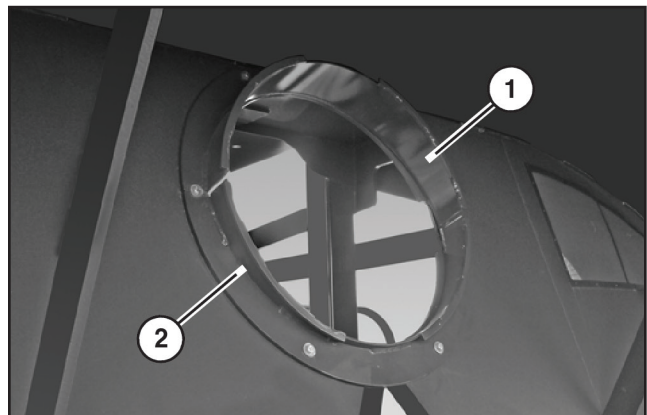
Position the base assembly on a flat level surface with adequate space around the base assembly for installation of individual components.

Remove retaining pin (1), rotate the jack (2) to the operation position and re-install retaining pin. Raise/lower the jack until the base assembly is level.

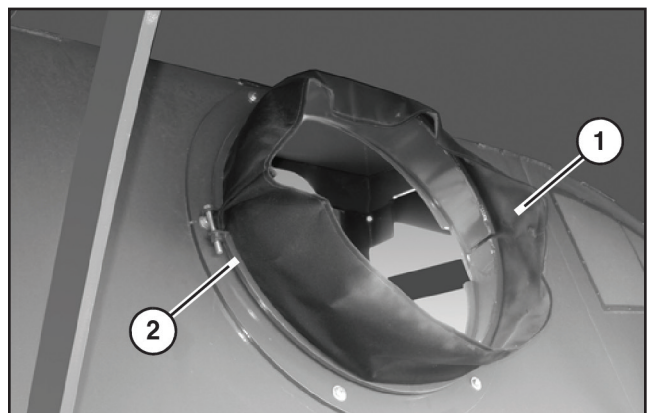
Install the main auger assembly (hitch) onto the forklift.



Align the main auger assembly (1) with the base assembly (2).



Install the top and bottom sleeve mounts (1 & 2) onto the back side of the tunnel.



Install the sleeve (1) around the top and bottom sleeve mounts. Install the retaining ring/clamp (2) over the sleeve and mounts. Tighten the retaining ring/clamp.

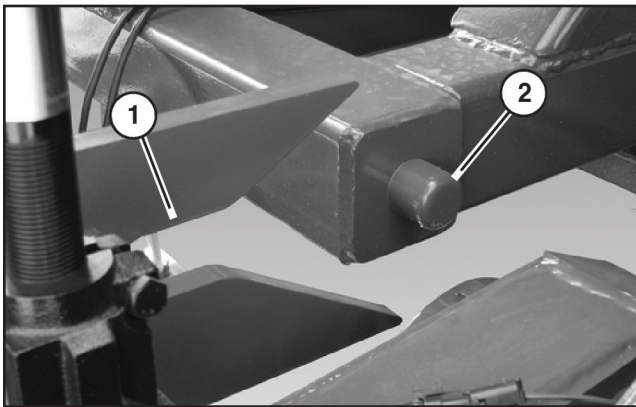
Initial Set-up (Cont'd)

Main Auger Installation (Cont'd)

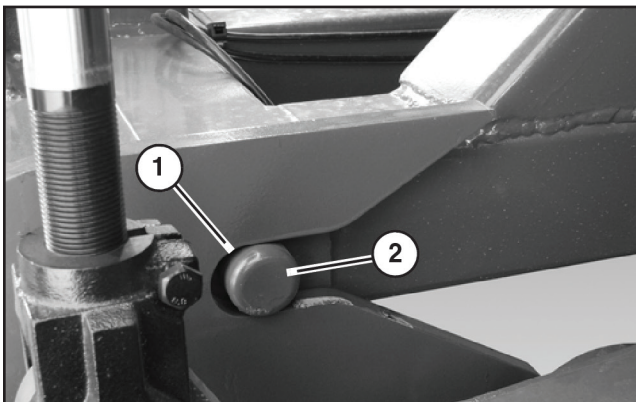
Move the main auger assembly towards the base assembly.

NOTE: *It may be necessary to connect the hydraulic hoses to a tractor aide during the main auger installation. This will allow the installers to raise/lower the main auger while installing into the base assembly.*

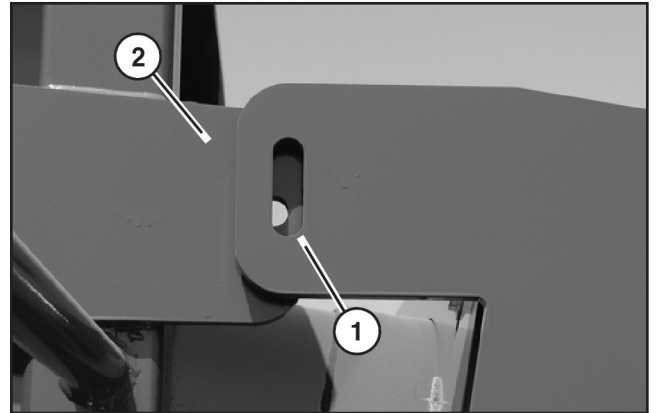
NOTE: *It may be necessary to raise/lower the base assembly jack while installing the main auger assembly.*



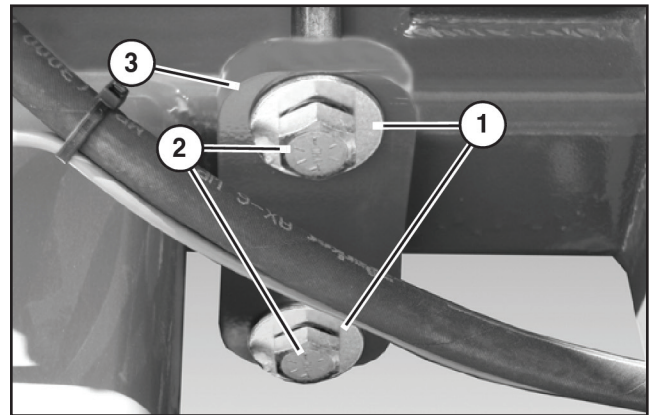
While moving the main auger forward, raise/lower the main auger assembly or base assembly until the slot (1) on the main auger frame is aligned with the mounting pin (2) on the base assembly frame.



With the main auger installed through the base assembly, move the main auger assembly forward until the slot (1) on the main auger frame contacts the mounting pin (2) on the base assembly frame.



Raise/lower the main auger assembly or base assembly until the slot (1) is aligned with the hole in the upper mounting plate (2) of the base assembly.



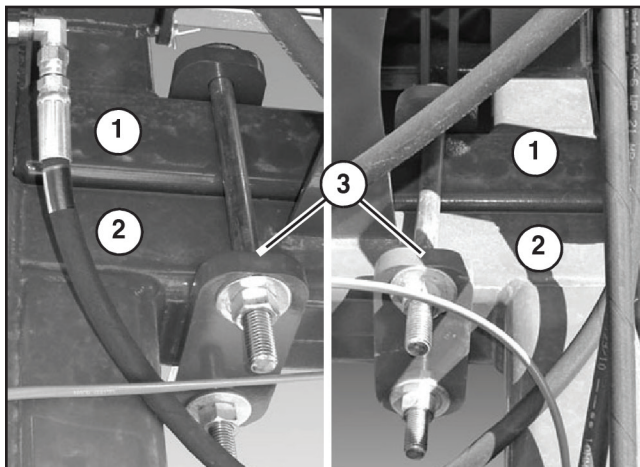
Install one 3/4" flat washer (1) on each 3/4" x 12" Grade 8 bolt (2).

Install two bolts with flat washers through one connector strap (3). Repeat procedure for two remaining two bolts.

Set-up Instructions

Initial Set-up (Cont'd)

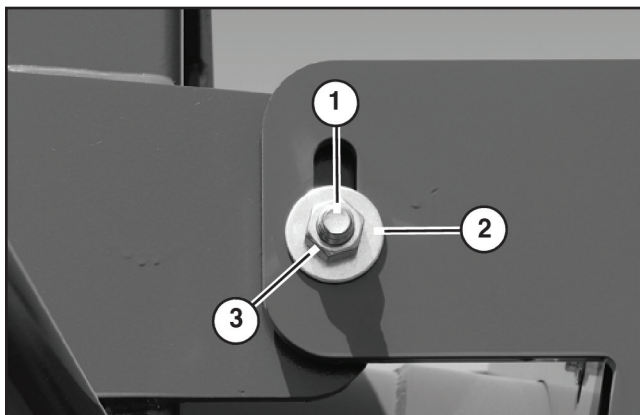
Main Auger Installation (Cont'd)



Install the two connector strap assemblies over the tunnel frame (1) and hitch frame (2) (both sides).

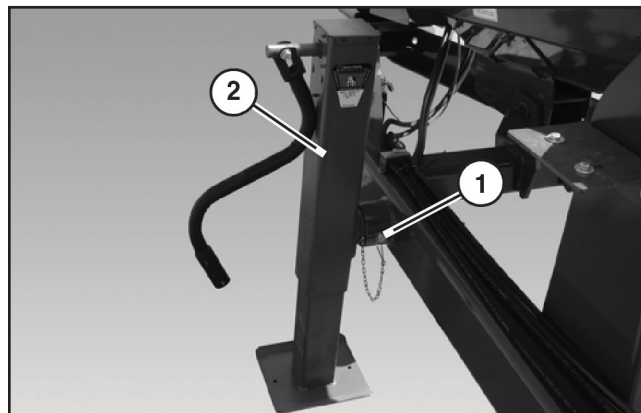
Install the remaining two connector straps (3). Install flat washers and nuts on the four bolts.

Tighten the four bolts/nuts evenly. As the bolts/nuts are tightened, the connector straps will pull the two frames together. Continue to tighten the four bolts/nuts until the two frames contact each other and no gap remains.



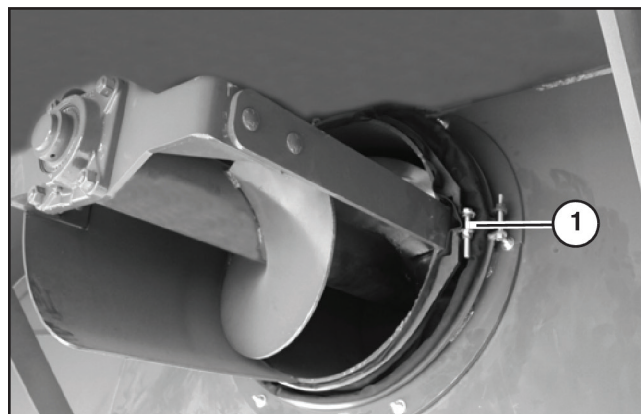
Install one flat washer onto the 3/4" x 3" Grade 5 bolt.

Install 3/4" x 3" Grade 5 bolt w/washer (1) through the base assembly and main auger assembly upper mounting plates. Install one flat washer (2) and nut (3) (both sides) and tighten nut.



Remove retaining pin (1), rotate the jack (2) to the operation position and re-install retaining pin. Raise/lower the jack until the main auger assembly is level.

Remove the forklift from the hitch.

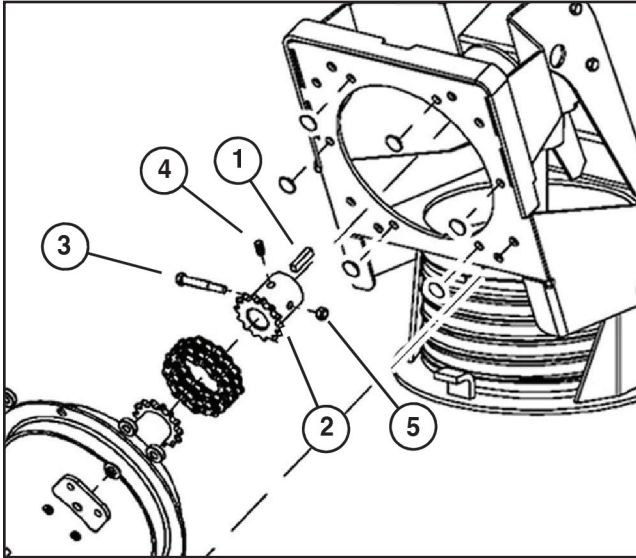


Install the second retaining ring/clamp (1) around the main auger and sleeve. Tighten the retaining ring/clamp.

Set-up Instructions

Initial Set-up (Cont'd)

Swing Tube/Spout Assembly (GBL12 only)

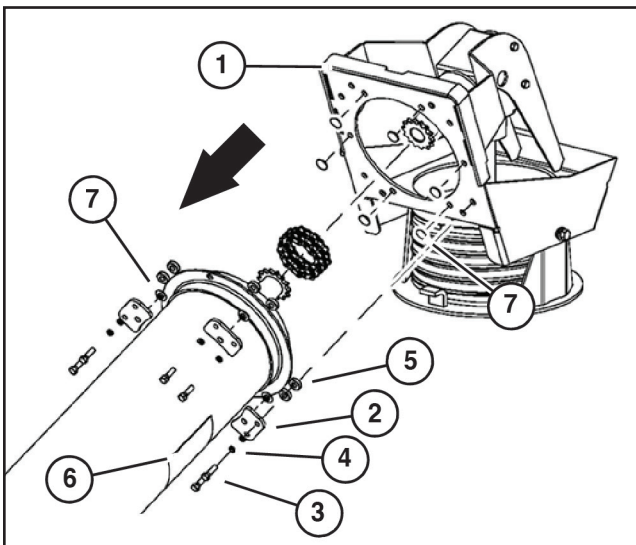


Remove the plastic cover from over the swing tube spout for easier access to the gearbox.

Install the 5/16" key (1) on the gearbox output shaft.

Align and install the gearbox sprocket (2) onto the gearbox output shaft. Secure the gearbox sprocket using a 3/8" x 3" Grade 8 bolt (3) and lock nut (5).

Install the 3/8" set screw (4).

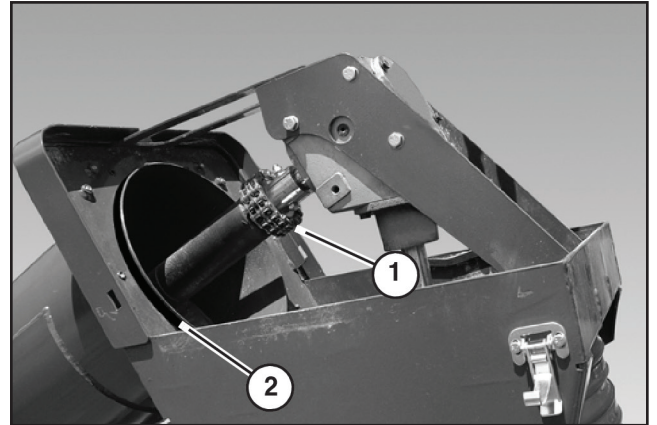


Install six slider bushings (7). Slide the spout assembly (1) onto the swing tube until it is against the angle flange.

Fasten the spout to the tube using the four retainer plates (2) using two 3/8" x 1-1/4" bolts (3), lock washers (4), and plastic spacer bushings (5) and one slider bushing (7).

NOTE: Do not over tighten these bolts. The spout must be able to rotate on the tube.

The tube wrap (6) welded to the swing tube must be oriented to the bottom as shown.

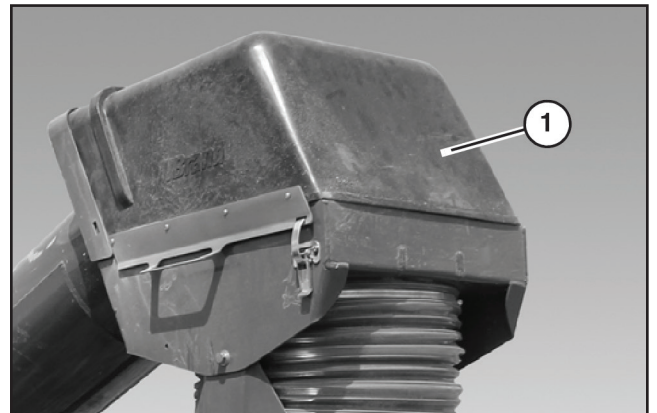


Install the 50-2 x 18 pitch roller chain (1) around the coupler sprockets as shown.

Remove the backing paper from the 42" foam strip.

Wrap the foam strip (2) around the lip of the swing tube which is inside the swing tube spout.

NOTE: Make sure the foam is tight against the inside of the spout plate.



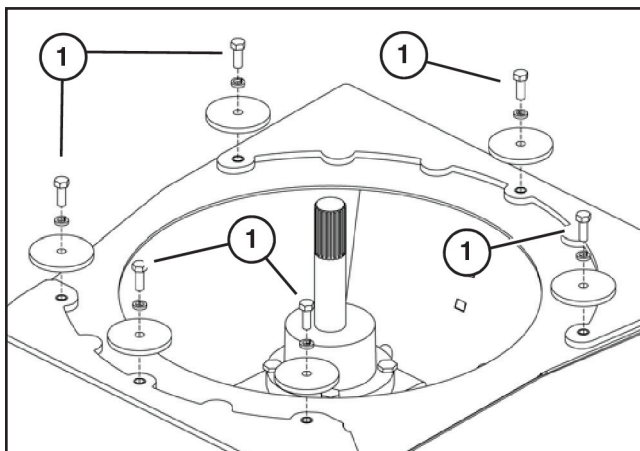
Reinstall the plastic spout cover removed earlier.

Set-up Instructions

Initial Set-up (Cont'd)

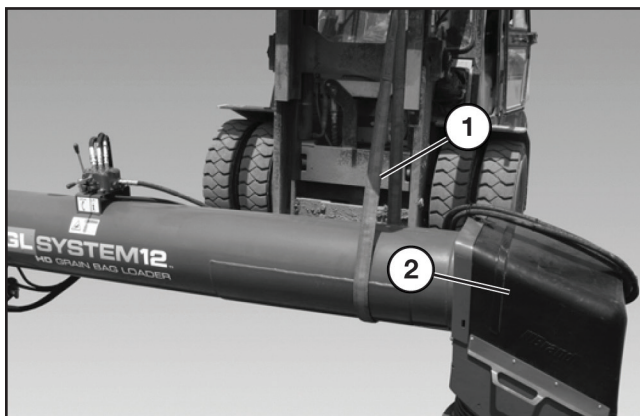
Mounting The Swing Auger (GBL12 only)

Clean the 21-spline shaft on the gearbox in the boot as well as the u-joint in the spout of the swing auger. Apply anti-seize compound to the splined shaft.



Remove the six bolts (1), lock washers and washers.

Swing Auger Installation (GBL12 only)

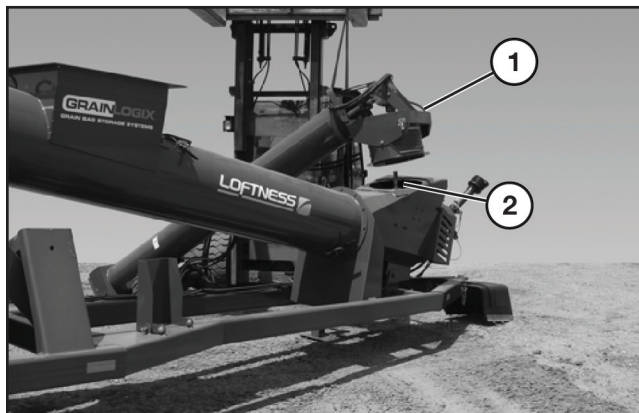


Install a lifting sling/strap (1) around the swing auger.

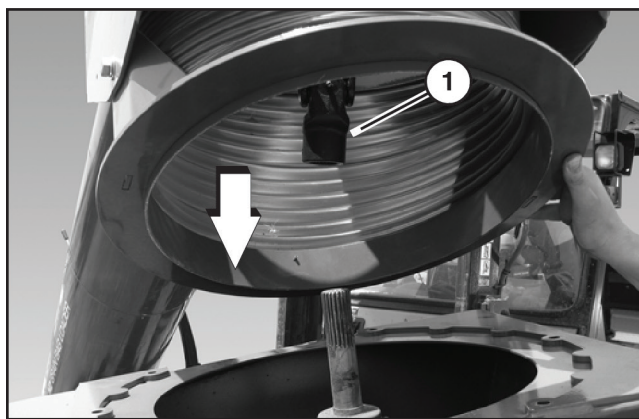
NOTE: Use lifting slings/straps that are in good condition and of adequate size to lift the swing auger.

Remove cover (2).

NOTE: Removing the cover will allow the installer to visually align the swing auger with the gear box shaft.



Move the swing auger (1) over the gearbox shaft (2).



Using a stick or a piece of metal, guide the u-joint (1) onto the boot gearbox while slowly lowering the swing auger.



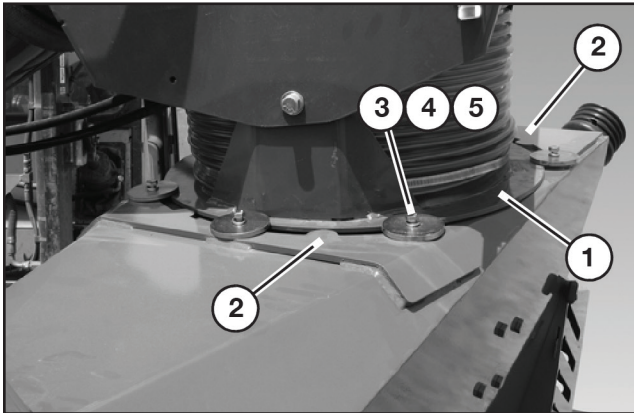
WARNING: Do not place hands in the intake boot while performing this operation. Severe injury will result!

NOTE: Rotate the u-joint to align the splines.

Set-up Instructions

Initial Set-up (Cont'd)

Swing Auger Installation (GBL12 only) (Cont'd)



When the auger is seated properly, the flange (1) on the end of the spout should lay flat onto the boot inside mounting plates (2).

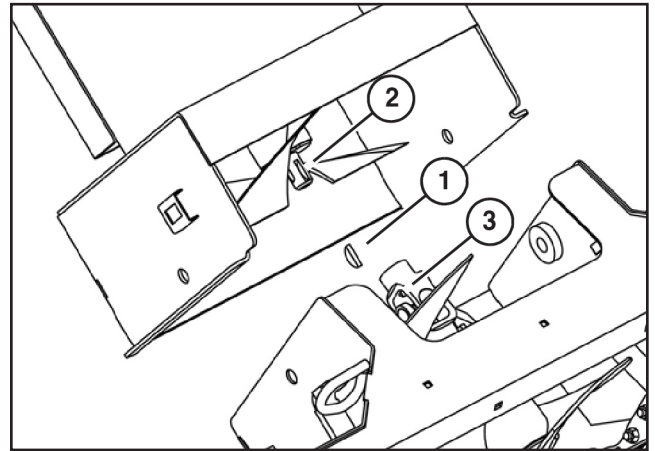
Secure in place using a 2-13/16" steel washer (3), 3/8" lock washer (4) and 3/8" x 1" bolt (5). The nut is welded to the inside of the boot. Repeat procedure on the remaining five locations around the flange.

Rotate the swing auger to ensure correct setup.

Tighten bolts securely against the swing auger swivel. Remove lifting sling/strap and forklift

Re-install the inspection cover.

Swing Hopper/Tube Assembly (GBL12 only)

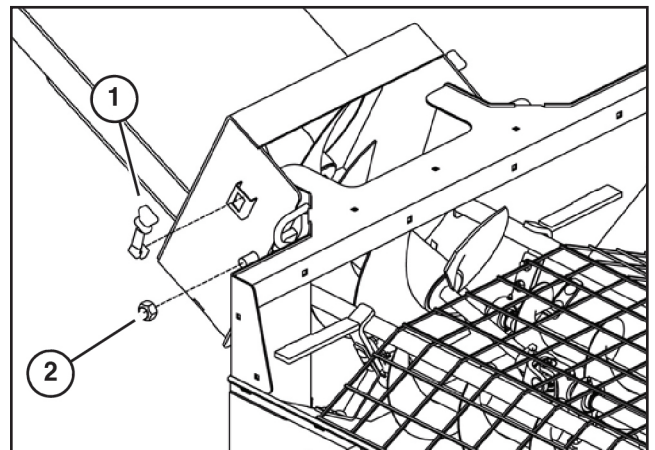


Install a woodruff key (1) and apply a thin coating of anti-seize compound on the swing flight shaft (2).

Move the hopper toward the swing tube and slide the u-joint onto the swing flight shaft (2).

NOTE: Do not install a set screw at (3).

NOTE: The u-joint must slide on easily. Buff the shaft and inside the u-joint if necessary.



Install the two rubber latches (1) in the small brackets on the sides of the transition section.

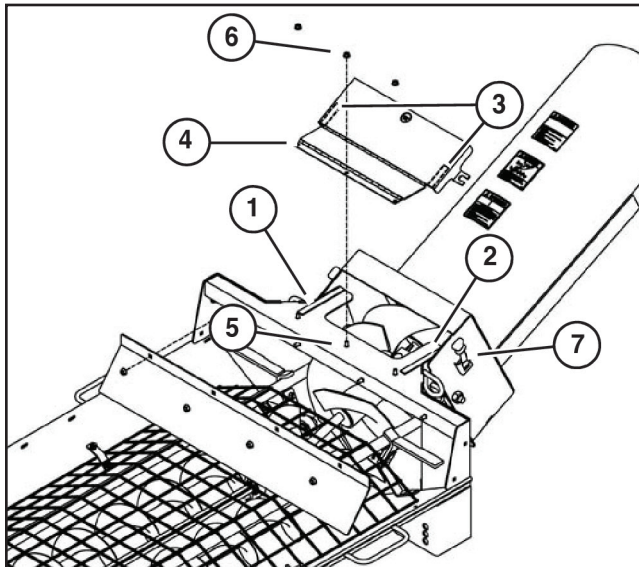
Secure the 13 in. hopper transition to the hopper using two 3/4" x 2" bolts (installed from the inside out) and 3/4" stover locknuts (2).

NOTE: Do not over tighten the nuts. The transition must be able to rotate on the hopper.

Set-up Instructions

Initial Set-up (Cont'd)

Transition Cover Installation (GBL12 only)



NOTE: Clean the surface of the hopper before applying the foam strips.

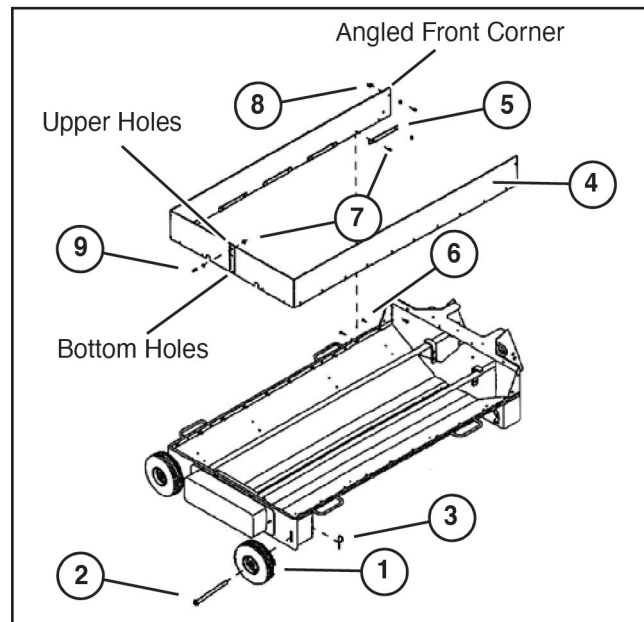
Remove the backing from one of the 3/4" x 6-3/4" foam strips (1) and install on the hopper. Install the second foam strip (2).

Attach the 3/4" x 3" foam strips (3) to the underside of the transition cover.

Mount the transition cover (4) to the hopper using three 5/16" x 3/4" carriage bolts (5) and locking flange nuts (6).

Stretch the rubber latches (7) over the receivers on the transition cover.

Swing Hopper Assembly (GBL12 only)



Install the hopper wheels (1) on the hopper using a plated wheel pin (2) (3/4" diameter pin with two holes) and a 3/16" hair pin clip (3) on both sides.

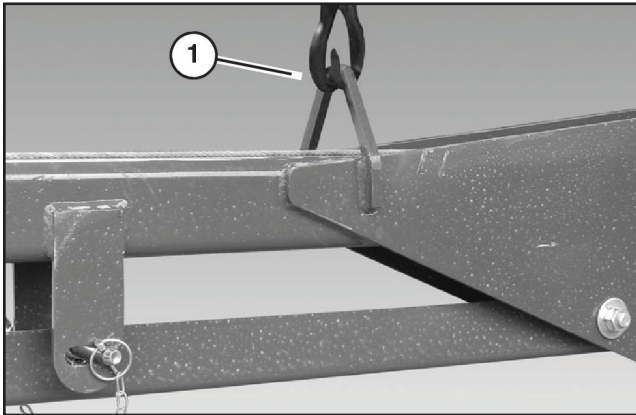
Install the rubber hopper extensions (4) on the inside of the hopper lip using the following bolts:

- All twelve aluminum straps (5) - 5/16" x 1" carriage bolts (6) and flange nuts (7).
- Bottom hole of the rear end of the hopper - 5/16" x 1" carriage bolt and a 5/16" flat washer (8) and 5/16" flange nut on the rubber side.
- Upper holes of the rear end of the hopper - 5/16" x 1" bolt (9), a 5/16" flat washer on both sides of the rubber and 5/16" flange nut.
- Angled front corners of the hopper - 5/16" x 1" carriage bolt and a 5/16" flat washer and 5/16" flange nut on the rubber side.

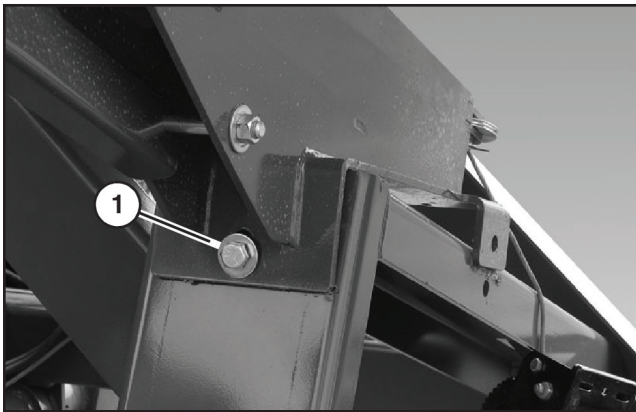
Set-up Instructions

Initial Set-up (Cont'd)

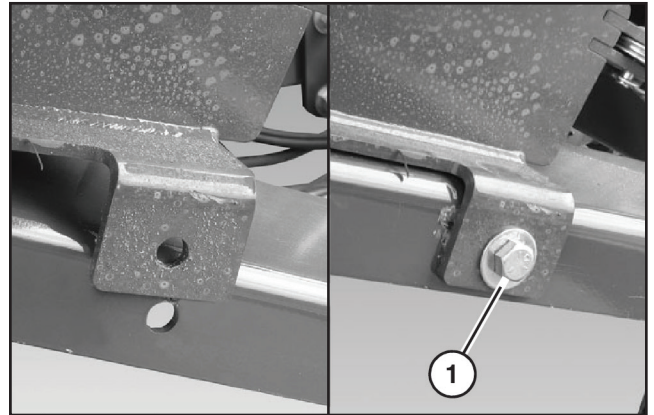
Swing Hopper Hoist Installation (GBL12 only)



Install a lifting chain (1) onto the swing hopper hoist.

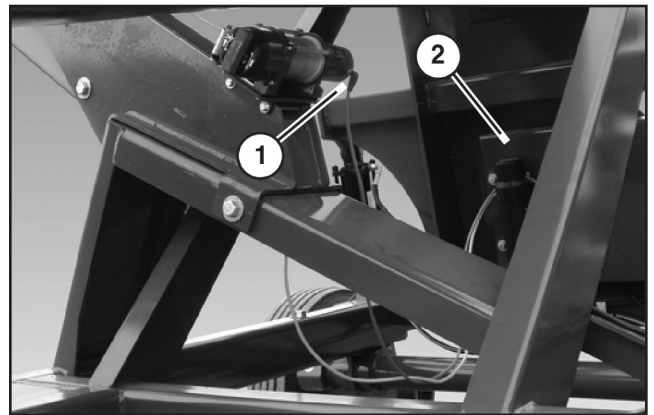


Move the swing hopper hoist towards the main auger frame. Align the swing hopper hoist with the mounting plate and install bolt (1), flat washer (both sides) and nut.



Slowly lower the swing hopper hoist until the mounting holes are aligned.

Install the bolt (1), flat washer (both sides) and nut. Tighten the two bolts to securely fasten the swing hopper hoist to the main auger frame.

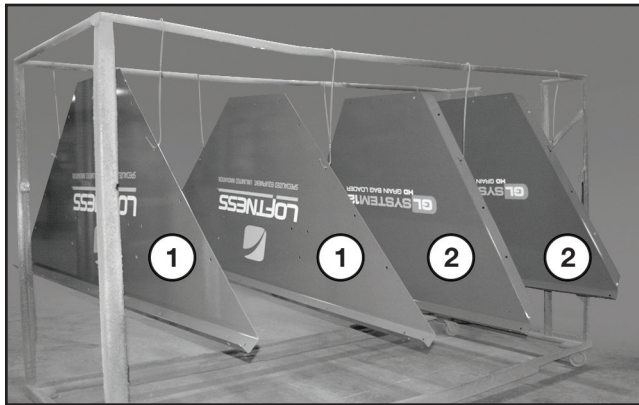


Route the two wires (1) from the electric winch to the control panel (2). Install the two wires into the control panel. See "Wiring Diagram (202635) - GBL12 and GBL12C" on page 131 for the correct wire locations.

Set-up Instructions

Initial Set-up (Cont'd)

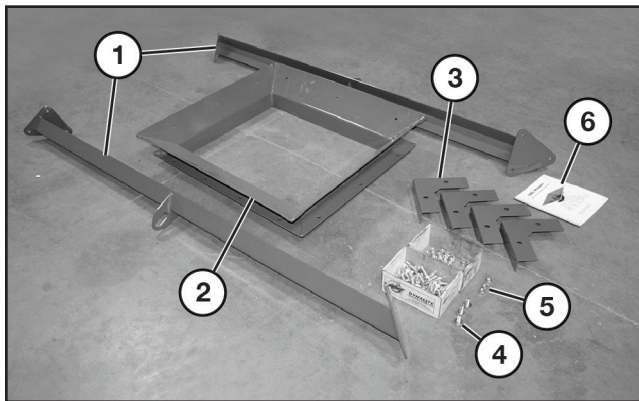
Main Hopper Assembly



Separate and inspect the following hopper components:

1. Front/back panels (N27335)
2. Side panels (N27338)

NOTE: If any of the hopper components are damaged or missing, contact your Loftness dealer.

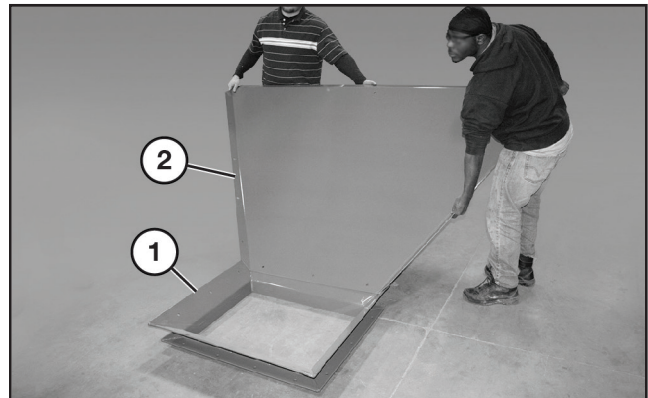


Open and remove the contents of the pail.

The pail should contain the following:

1. Two hopper braces (N27339)
2. One hopper base (N27323)
3. Four corner braces (N22909)
4. One box of 1/2" x 1-1/4" bolts (N18360)
5. One bag of 1/2" nuts (N29075)
6. Hopper assembly instruction manual (N29234)

NOTE: The following procedure requires two people and possibly a third person at times, during the assembly process.

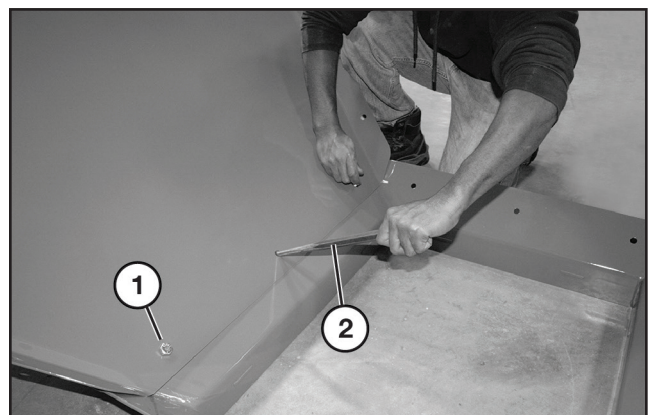


Place the hopper base (1) on the ground.

NOTE: The wide sides of the hopper base are the left/right side of the hopper as it is positioned on the grain bag loader. The narrow sides are the front/back. Each side's opposite is identical in size and design.

Using two people, place a side panel (2) into position inside a wide side of the hopper base.

IMPORTANT: Fastening hardware should be assembled so that all bolt heads are inside the assembled hopper and the nuts secured outside of the hopper. This will reduce the amount of grain and debris that can collect around the hardware when the machine is in use.



Insert three 1/2" x 1-1/4" bolts (1) from inside of the hopper and through the hopper base, securing with the 1/2" nuts on the outside of the hopper.

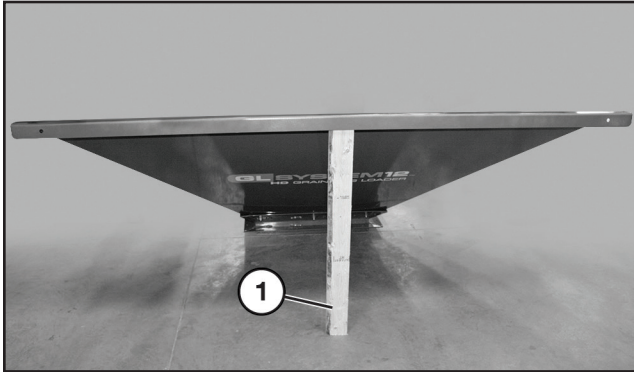
NOTE: Use an aligning punch (2) to assist in installing bolts that may be difficult to insert.

NOTE: Do not tighten bolts and nuts at this time.

Set-up Instructions

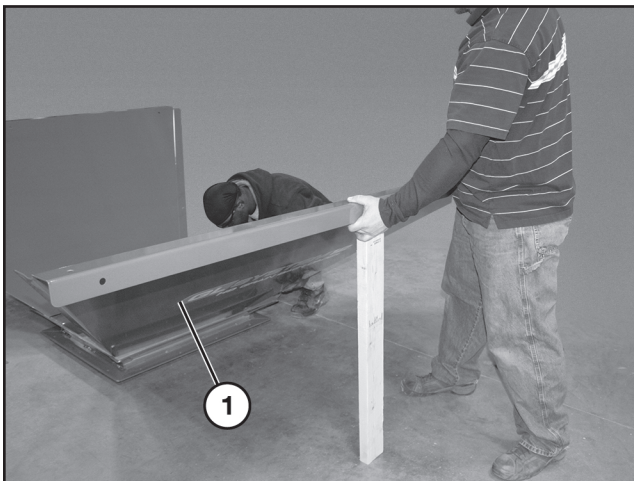
Initial Set-up (Cont'd)

Main Hopper Assembly (Cont'd)



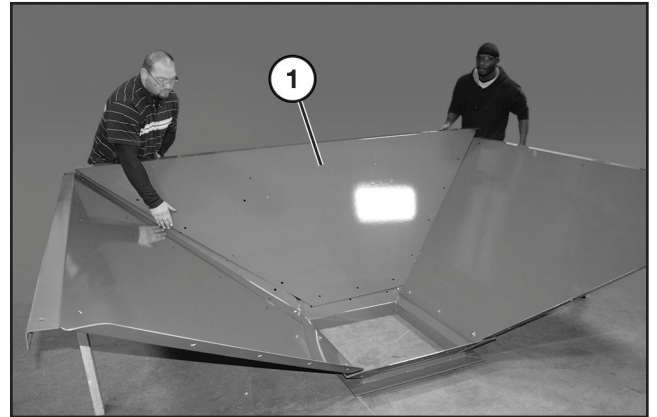
Place a 2" x 4" - 37 in. (or larger) brace (1) at center to support the panel while the remaining panels are being added.

NOTE: *More than one brace may be needed depending on the number of people assisting with assembly.*

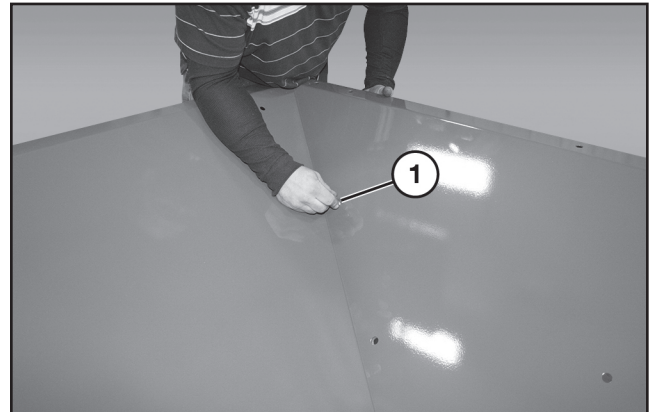


Assemble the opposite side panel (1) to the hopper base following the same procedure as the other side panel, supporting the panel with a brace.

NOTE: *Do not tighten bolts and nuts at this time.*



Position a front/back panel (1) inside the two side panels and hopper base.



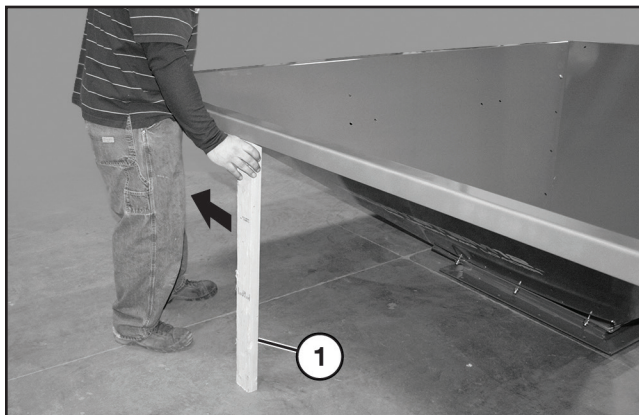
Insert a 1/2" x 1-1/4" bolt in the top hole (1) at each corner. Ensure bolt goes through both panels, and then secure with 1/2" nuts on the outside of the hopper.

NOTE: *Do not tighten bolts and nuts at this time.*

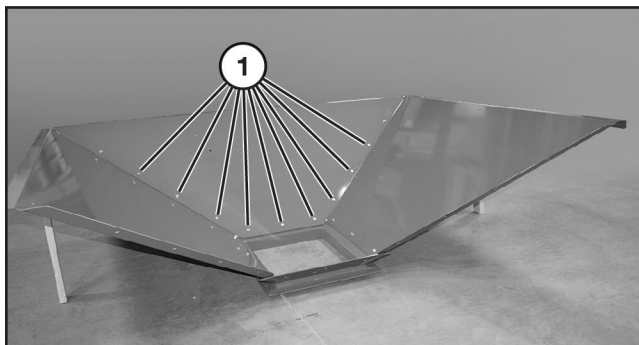
Set-up Instructions

Initial Set-up (Cont'd)

Main Hopper Assembly (Cont'd)

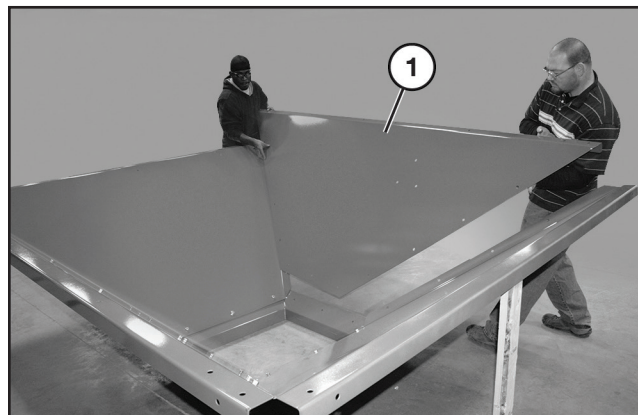


Move the brace (1) out slightly towards the newly added panel to support and balance the weight of the hopper assembly.

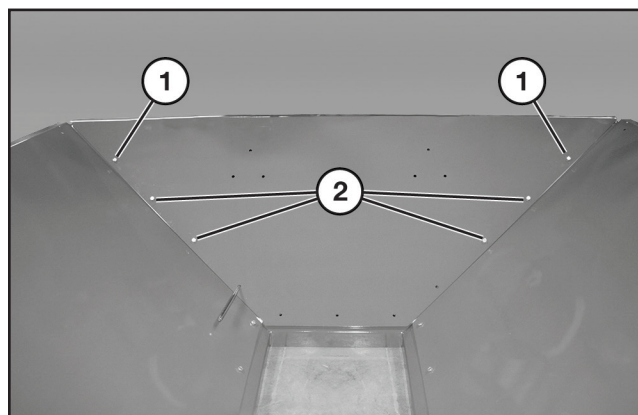


Insert the remaining 1/2" x 1-1/4" bolts, and secure with the 1/2" nuts on the outside of the hopper and hopper base.

NOTE: Do not tighten bolts and nuts at this time.



Position the final front/back panel (1) inside the two side panels and hopper base.



Secure the panel by first inserting 1/2" x 1-1/4" bolts in the top hole at each corner (1). Ensure bolt goes through both panels, and then secure with 1/2" nuts on the outside of the hopper.

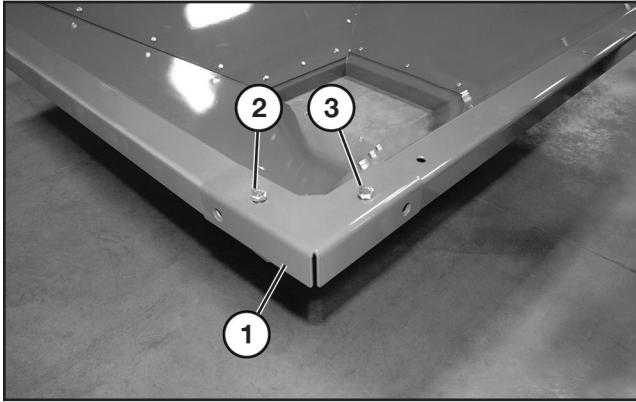
Insert as many 1/2" x 1-1/4" bolts as can be reached (2) from outside the hopper. Secure with the 1/2" nuts on the outside of the hopper.

NOTE: Do not tighten bolts and nuts at this time.

Set-up Instructions

Initial Set-up (Cont'd)

Main Hopper Assembly (Cont'd)



Install one corner bracket (1) and align with holes in the hopper panels. Insert one 1/2" x 1-1/4" bolt (2) from the top and secure on the underside with a 1/2" nut. Insert a bolt in the opposite bracket hole (3) and secure with a nut.

NOTE: Do not tighten bolts and nuts at this time.

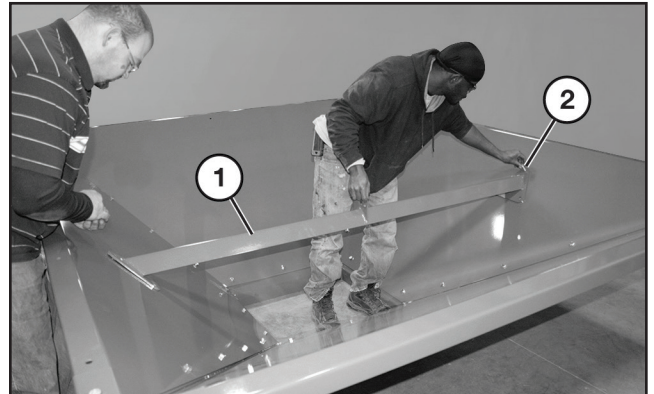
Repeat this procedure for the bracket on the opposite corner, and then follow with the remaining two corner brackets.



With one person pushing down on a front/back panel, have another person climb inside the hopper.

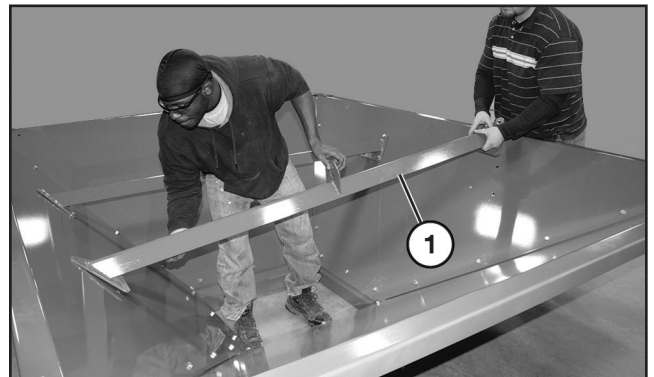
Insert the remaining bolts and nuts securing the final panel to the side panels and hopper base.

NOTE: Do not tighten bolts and nuts at this time.

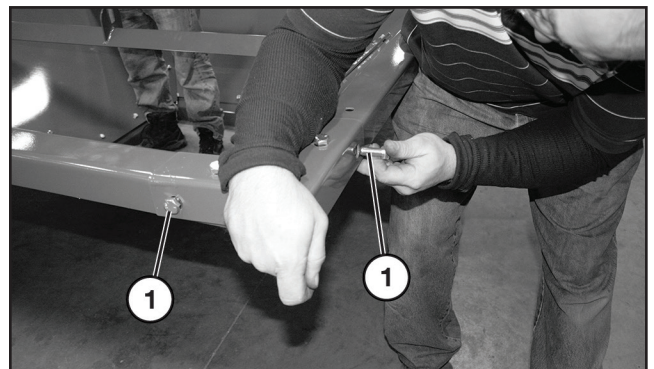


Place a hopper brace (1) into position. Use the set of holes in the hopper front and back panels to align.

Insert three 1/2" x 1-1/4" bolts (2) from inside of the hopper at each end of the brace. Secure with 1/2" nuts on the outside of the hopper.



Add the second hopper brace and secure following the same fastening procedure as the previous hopper brace.



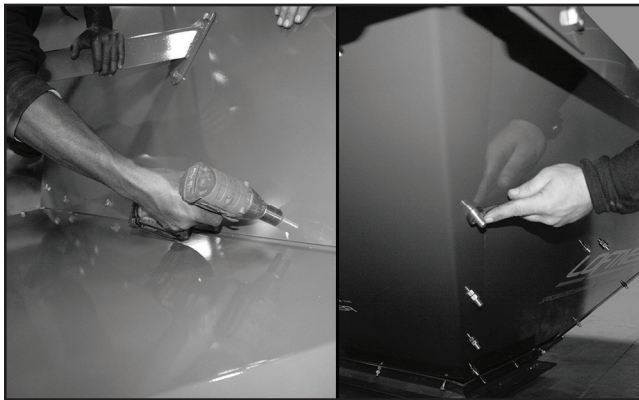
Add the remaining bolts (1) at each corner bracket. Secure with nuts.

NOTE: Do not tighten bolts and nuts at this time.

Set-up Instructions

Initial Set-up (Cont'd)

Main Hopper Assembly (Cont'd)



Have the person inside the hopper turn the bolts with an impact wrench, while the person outside holds the corresponding nut with a 3/4" inch wrench.

Tighten all the bolts and nuts along the panel seams (16 total).

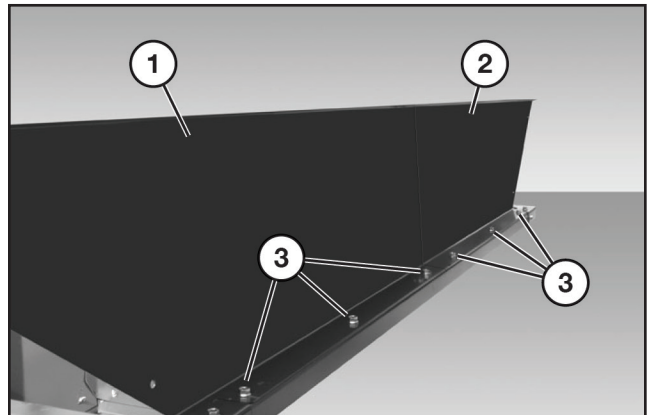
Tighten the bolts and nuts securing the four panels to the hopper base (12 total).

Tighten all the bolts and nuts securing the hopper brace to the hopper panels (12 total).

While the outside person holds down one side of the hopper, the person inside can now exit the hopper out the opposite side.

Tighten the four bolts and nuts on each corner brace (16 total).

NOTE: *The remaining hardware will be used to secure the assembled hopper to the auger assembly.*



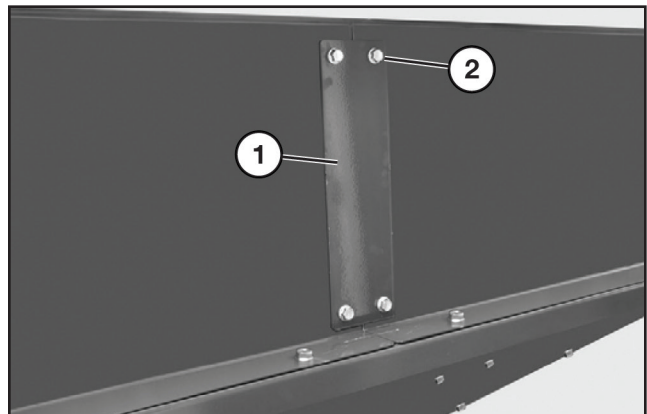
Place two of the hopper extension side panels (1 and 2) on top of the hopper.

Align the holes of the front panels with the holes in the top of the hopper.

Install the six 1/2" x 1-1/4" bolts (3) and secure with 1/2" nuts.

NOTE: *Do not tighten bolts and nuts at this time.*

Repeat the previous procedure for the hopper extension back panels on the opposite side of the hopper.



Align the scab plate (1) with the two front panels. Install the four 1/2" x 1-1/4" bolts (2) and secure with 1/2" nuts.

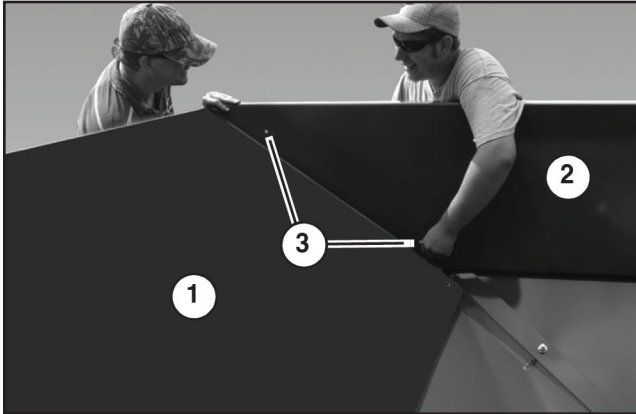
NOTE: *Do not tighten bolts and nuts at this time.*

Repeat the previous procedure for the scab plate on the back side of the hopper.

Set-up Instructions

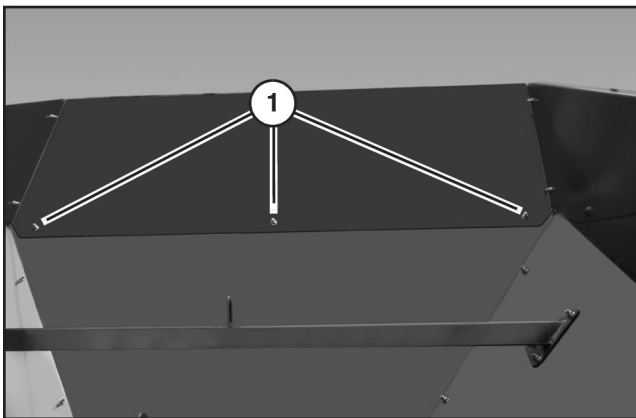
Initial Set-up (Cont'd)

Main Hopper Assembly (Cont'd)



Place one hopper extension side panel (1) outside the hopper extension front and back panels (2).

Install 1/2" x 1-1/4" bolts (3) and secure with 1/2" nuts (both sides).



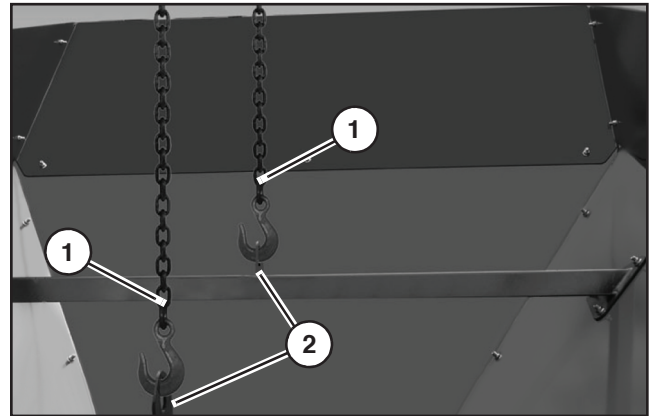
Install these three 1/2" x 1-1/4" bolts and secure with 1/2" nuts (1).

NOTE: Do not tighten bolts and nuts at this time.

Repeat the previous procedure for the remaining hopper extension side panel on the opposite end of the hopper.

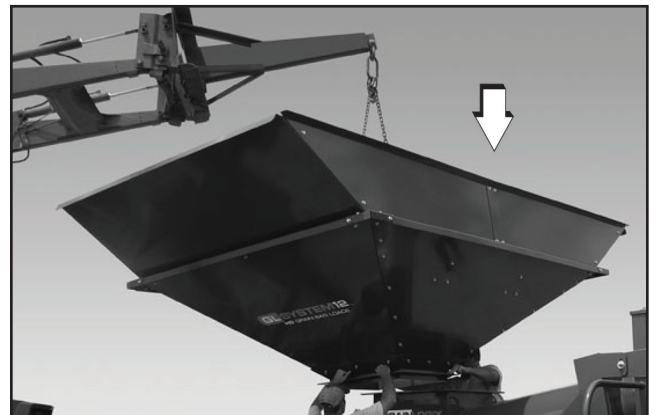
Tighten all bolts and nuts to securely fasten the hopper extension panels to the hopper.

Main Hopper Installation



Install chains (1) at the two lift points (2) on the hopper cross braces.

Raise the hopper slowly, then move the hopper over the mounting frame.



Align and lower the hopper onto the mounting frame.

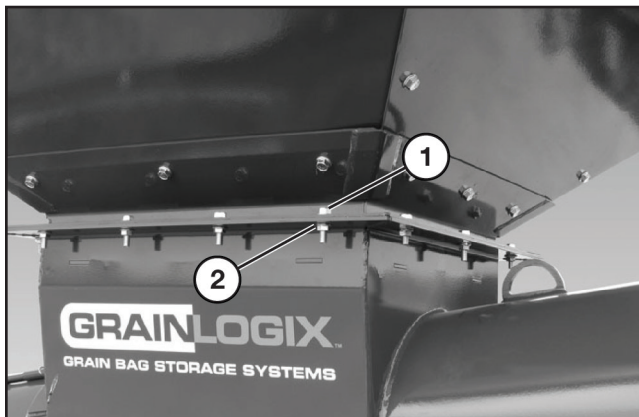
Set-up Instructions

Initial Set-up (Cont'd)

Main Hopper Installation (Cont'd)



Lower the hopper inside the mounting frame.



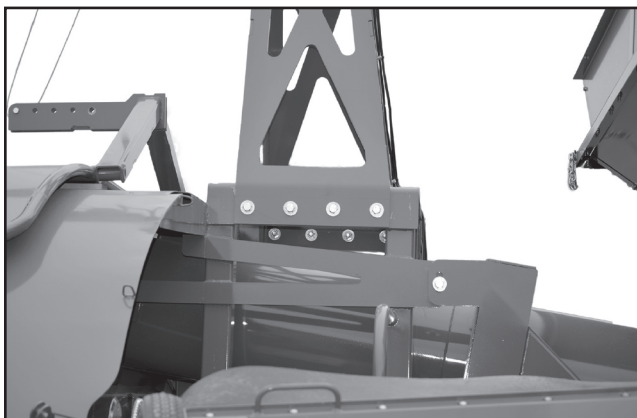
Install the 1/2" x 1-1/4" bolts (1) and secure with 1/2" lock nuts (2). Tighten the bolts.

Remove the chains from the hopper cross braces.

Beam/Trolley Installation



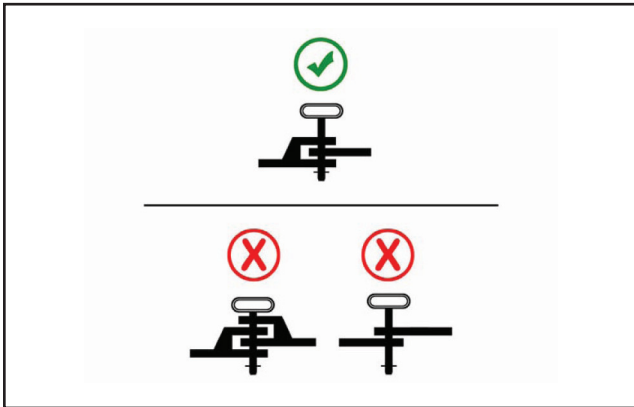
Install chains to the beam/trolley assembly. Slowly raise and move the assembly over the mounting plate.



Install a bolt through the rear of the beam/trolley assembly and mounting plate. Install a nut onto the bolt. This will aid in aligning the remaining holes of the beam/trolley assembly and mounting plate.

Tighten the bolts and nuts to securely fasten the beam/trolley assembly to the mounting plate.

Connecting the Grain Bag Loader

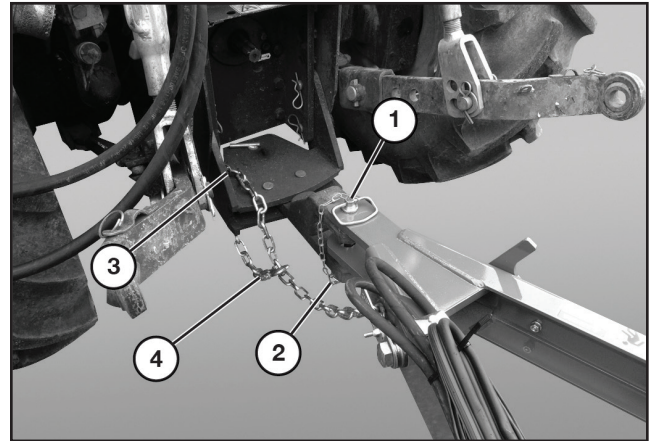


WARNING: *Never use a clevis to clevis type connection to secure the implement to the tractor. The machine could separate from the tractor if a clevis pin fails.*



Safety Chain Requirements:

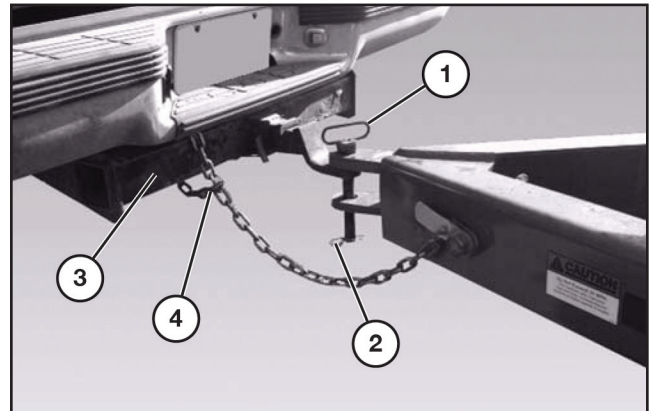
- Verify that the chain has a load rating equal to or greater than the Gross Vehicle weight.
- Allow no more slack in the chain than necessary for articulation.
- Attach the chain to the towing hitch assembly. Do NOT use an intermediate support as a primary method of attachment.
- Verify that the hitch of the towing vehicle is rated for the gross weight of the towed machine.
- The implement may not exceed 1.5 times the towing vehicle weight.
- Replace the safety chain if one or more links or end fittings are broken, stretched or otherwise damaged or deformed.



Back the tractor up to the hitch of the grain bag loader.

Insert pin (1) (1-1/8 in. to 1-1/4 in. pin) and secure with retaining clip (2).

Install the safety chain around the tractor drawbar (3) and fasten the chain ends together (4).



Back the truck up to the hitch of the unloader.

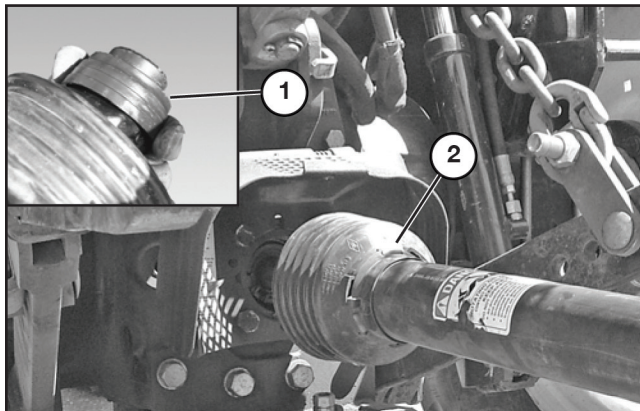
Insert pin (1) (1-1/8 in. to 1-1/4 in. pin) and secure with retaining clip (2).

Install the safety chain around the truck's hitch frame (3) and fasten the chain ends together (4).

Once the grain bag loader has been connected to the towing vehicle, the jack stand should be removed from the back of the machine and placed in its storage location.

Set-up Instructions

Connecting the Grain Bag Loader (Cont'd)



Retract sleeve (1), slide the PTO driveline (2) onto the tractor PTO shaft until the sleeve slides forward and locks driveline to shaft. Push and pull the PTO driveline back and forth several times and make sure it is securely attached to the PTO shaft.

The PTO driveline is telescopic to fit most lengths. The connection should be never more or less than 3-4 inches (7.6-10 cm) away from the tractor connection. If the distance is more or less than that, refer to the PTO driveline manufacturer's literature for procedures for adjusting the length. Also, the PTO angle should not exceed 25°.



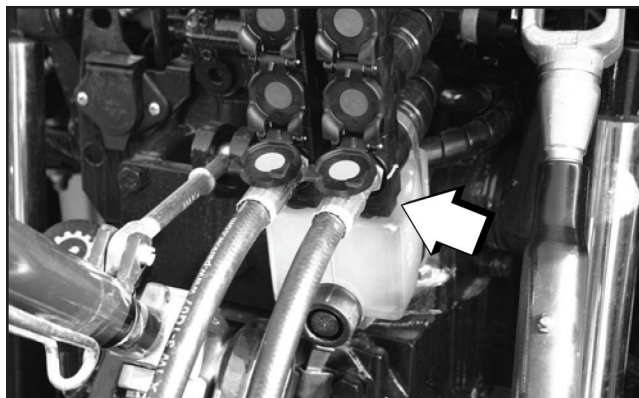
CAUTION: Never use a steel hammer when connecting or disconnecting a PTO shaft.



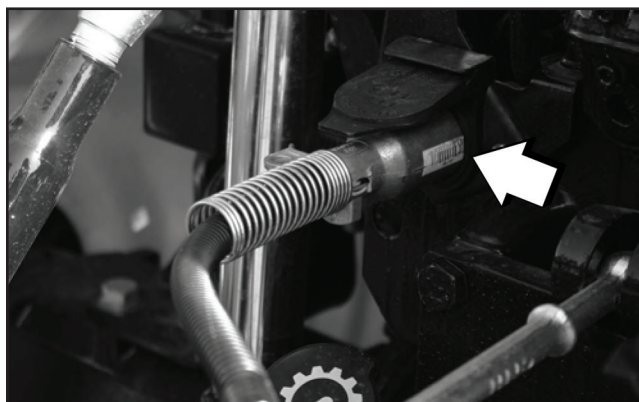
CAUTION: DO NOT USE PTO ADAPTERS OF ANY KIND.



CAUTION: The hydraulic system is under high pressure. Make sure all lines and fittings are tight and in good condition. These fluids escaping under high pressure can have sufficient force to penetrate skin and cause serious injury.



Install the pressure and the return hydraulic hoses into the tractor's hydraulic connectors at the rear of the tractor.



Install the 7-pin electrical harness to the tractor's electrical connector.

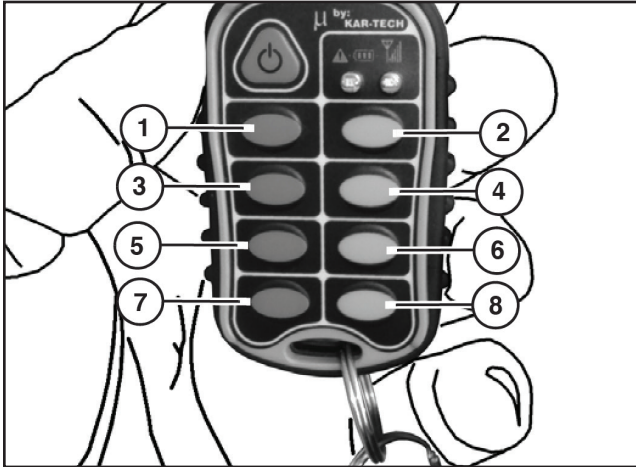
NOTE: Install the electric winch cable connections directly to the tractor battery (12 Volts are required).



Secure the electrical harness, winch harness and all hydraulic hoses up and away from the PTO driveline area.

Installing The Grain Bag

Transmitter Identification

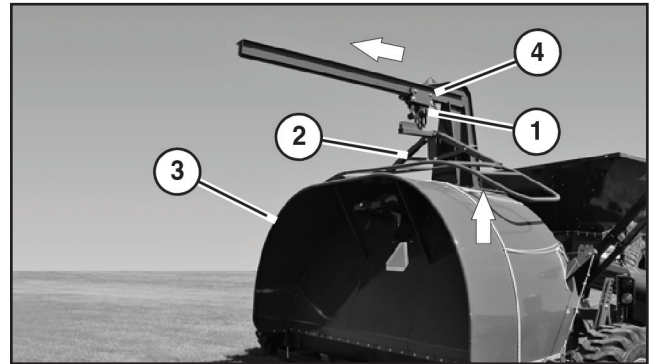


1. HOIST UP ↑ - Press button to raise the hoist.
2. HOIST DOWN ↓ - Press button to lower the hoist.
3. TROLLEY IN ← - Press button to move the trolley in.
4. TROLLEY OUT → - Press button to move the trolley out.
5. PAN IN ← - Press button to move the pan tarp in.
6. PAN OUT → - Press button to move the pan tarp out.
7. SWING AUGER UP ↑ - Press button to raise the swing auger.
8. SWING AUGER DOWN ↓ - Press button to lower the swing auger.

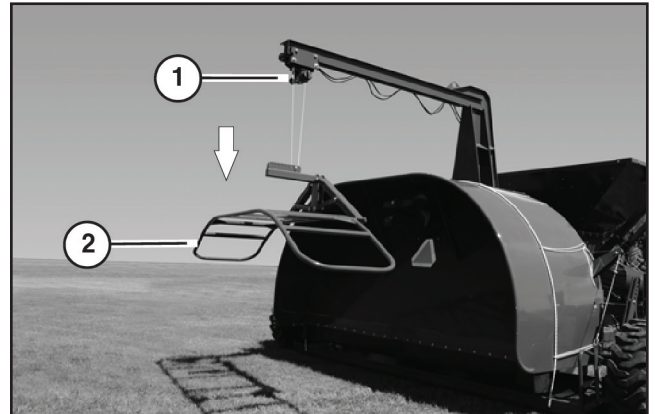
To ID a new transmitter to the receiver:

1. Turn the transmitter off.
2. Press and hold the "POWER" button on the transmitter for 10 seconds.
3. The green and the red lights on the transmitter will toggle at this point.
4. Press and hold the teach button, on the side of the receiver control box for 3 seconds.
5. The lights will stop toggling and the green light starts blinking.
6. Teach completed.

Procedure



Raise the hoist (1), lifting the bag cradle (2) off the tunnel (3). Move the trolley (4) out until the bag cradle clears the tunnel.

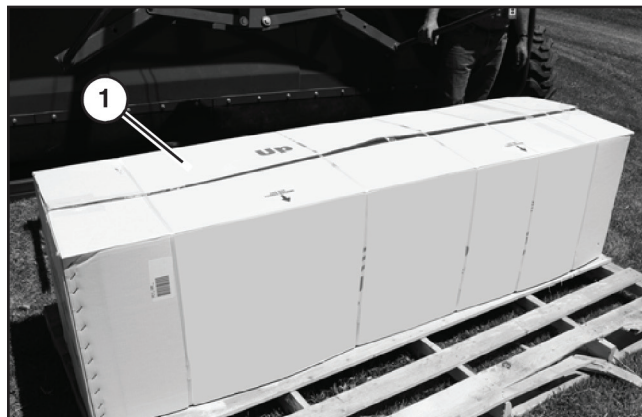


Lower the hoist (1) placing the bag cradle (2) on the ground.

Set-up Instructions

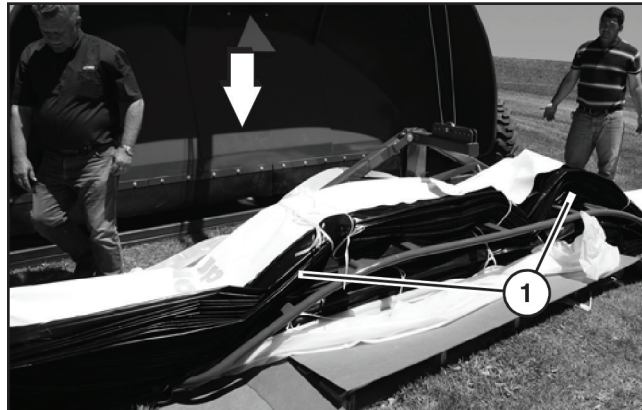
Installing The Grain Bag (Cont'd)

Procedure (Cont'd)



Place the grain bag behind the tunnel. Remove shipping bands, then remove the top half of the box (1).

NOTE: *Be careful not to damage the grain bag when removing the shipping bands and top half of the box.*

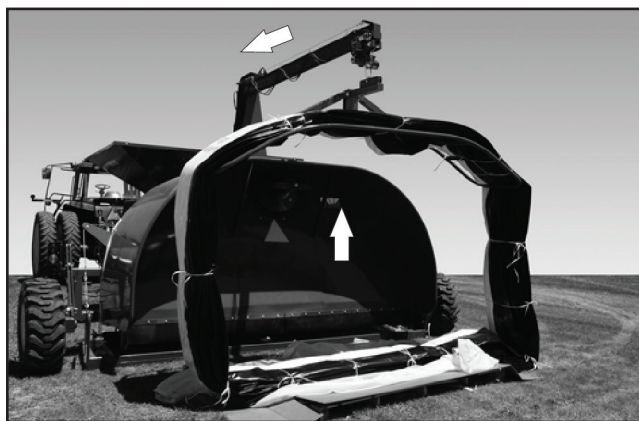


Move the cradle to the grain bag, slide the cradle in between the top half and bottom half of the grain bag.

NOTE: *Be careful not to puncture grain bag.*



Raise the cradle and grain bag.



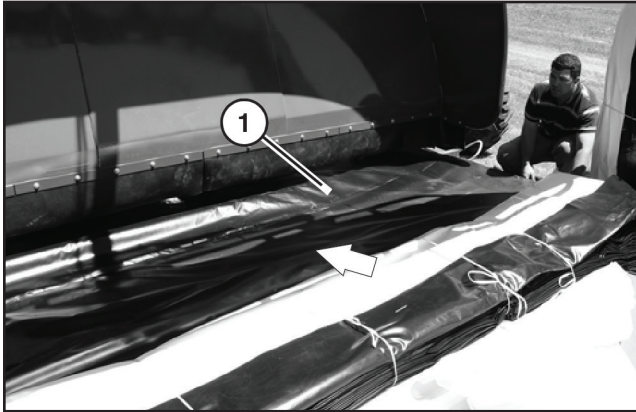
Raise the hoist until the grain bag cradle is above the tunnel.

Move the trolley in until the grain bag cradle is flush with the end of the tunnel.

Set-up Instructions

Installing The Grain Bag (Cont'd)

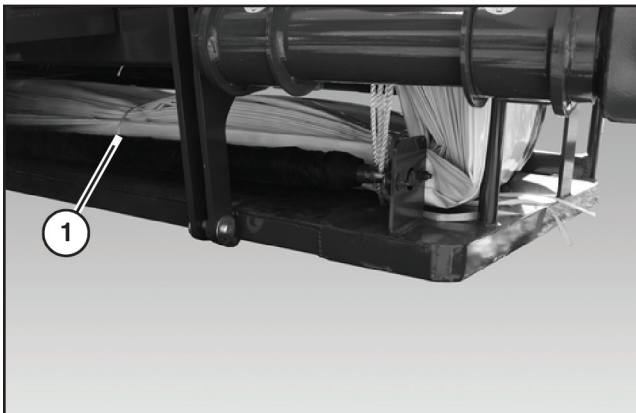
Procedure (Cont'd)



Lower the pan and pull the tarp out, guiding the tarp under the grain bag. Place the bottom of the grain bag on the tarp.

Move the trolley in towards the tunnel. Pull on the tarp while moving the trolley towards the tunnel. Hold onto the end of the tarp, guiding the tarp/grain bag straight into the pan. Position the grain bag around the tunnel.

NOTE: Hold the end of tarp as the grain bag moves towards the pan.



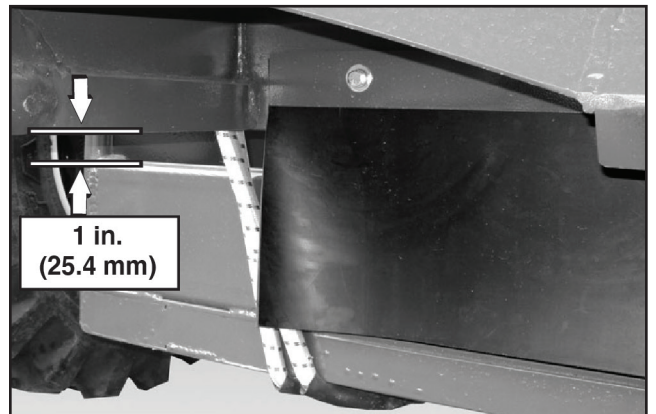
Remove shipping ties (1) from the grain bag.

NOTE: Be careful not to damage the grain bag when removing the shipping ties.



Install the bungee cord and ties over the grain bag.

NOTE: For longer life, store the bungee cord out of the sunlight when not in use.



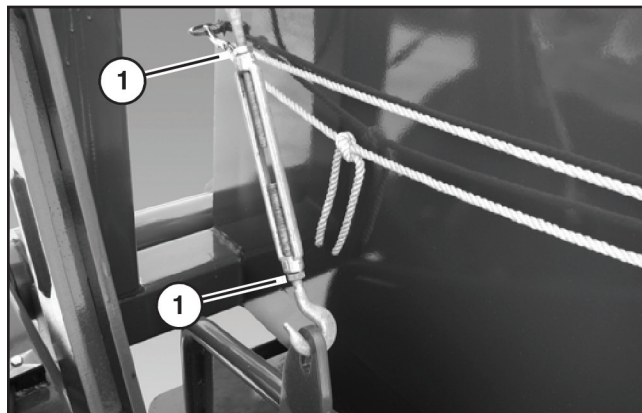
Raise the bag pan until there is approximately 1 in. (25.4 mm) of space between the pan tube and bottom side of the grain bag loader housing.

NOTE: The space between the bag pan and the grain bag loader housing must be even from side to side for the grain bag to unfold correctly during the bagging operation. Adjust the bag pan if needed.

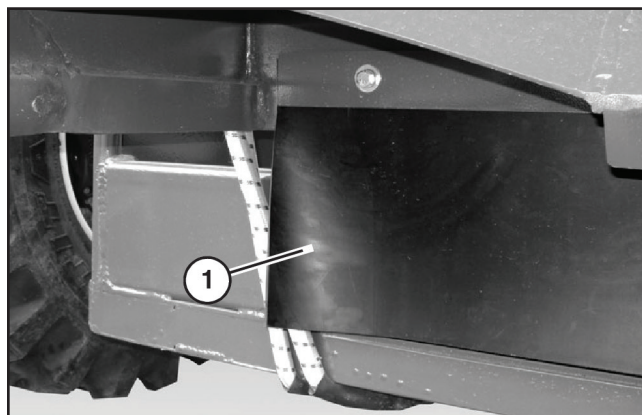
Set-up Instructions

Installing The Grain Bag (Cont'd)

Procedure (Cont'd)



If the space is not the same as the winch side of the bag pan, loosen the two jam nuts (1) and adjust the turn-buckle until the space is equal from side to side. Tighten the jam nuts.



Inspect the rubber flap (1) on the grain bag loader housing. The rubber flap should be free and should cover the grain bag in the tray. The rubber flap must hang outside the tray.

NOTE: The rubber flap will help keep the grain from flowing back into the unused portion of the grain bag.

Grain Bag Loader Positioning

Procedure

NOTE: When loading the grain bags, move the loading equipment and position it facing up the slope. Loading the grain bags up the slope will aid the operator in braking the machine.



WARNING: Do Not place grain bags near or under power lines.



WARNING: Do not allow anyone to operate the machine until he or she has read the owner's manual and is completely familiar with all safety precautions.



WARNING: Do not allow persons under the influence of alcohol, medications, or other drugs that can impair judgment or cause drowsiness to operate or maintain the machine.



Move the grain bag loader into position facing up the slope. Stop the tractor and exit the tractor.

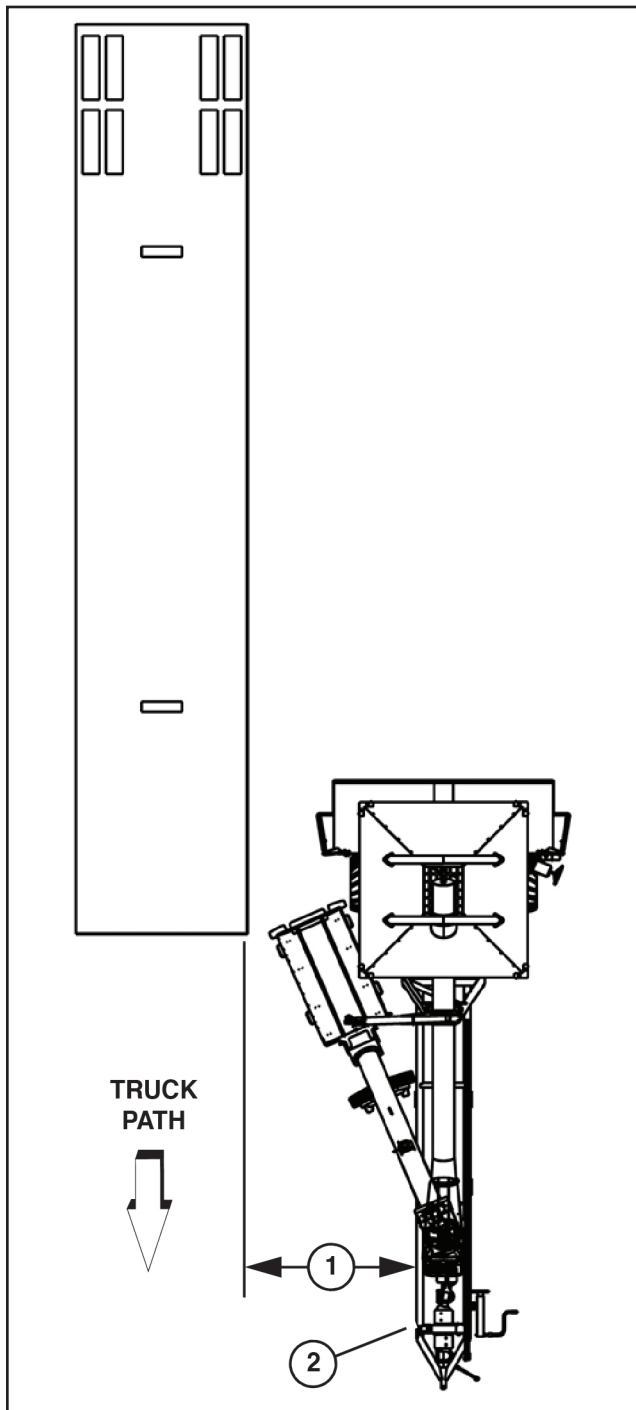
Place a marker at the starting edge of the grain bag and stretch it along the side of the tractor. Extend the marker out in front of the tractor and as straight as possible to the desired length. Secure both ends of the marker.

NOTE: The marker will help the tractor operator to maintain a straight line during the grain bag loading process. Unloading the grain bags is much more efficient if the bags are kept straight during the loading process.

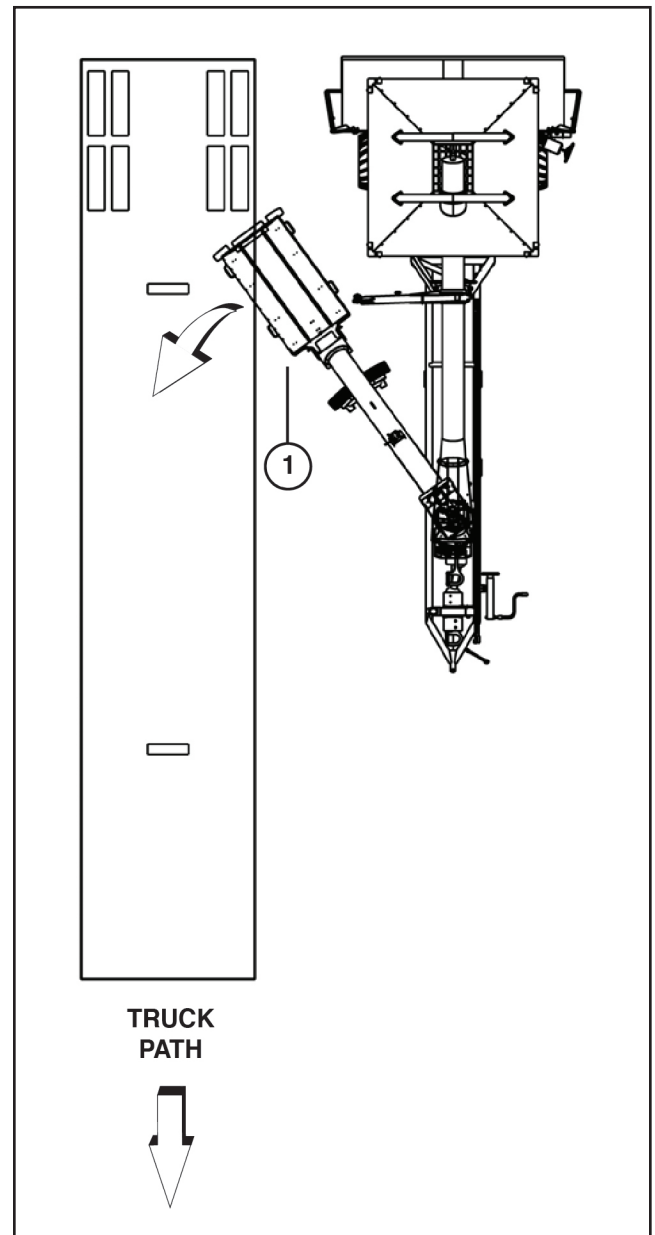
See "Getting Started" on page 43.

Equipment Positioning (GBL12 Only)

Truck Position



STEP #1 - Align the trailer parallel to and approximately 100" (1) from the edge of the truck auger hitch (2).

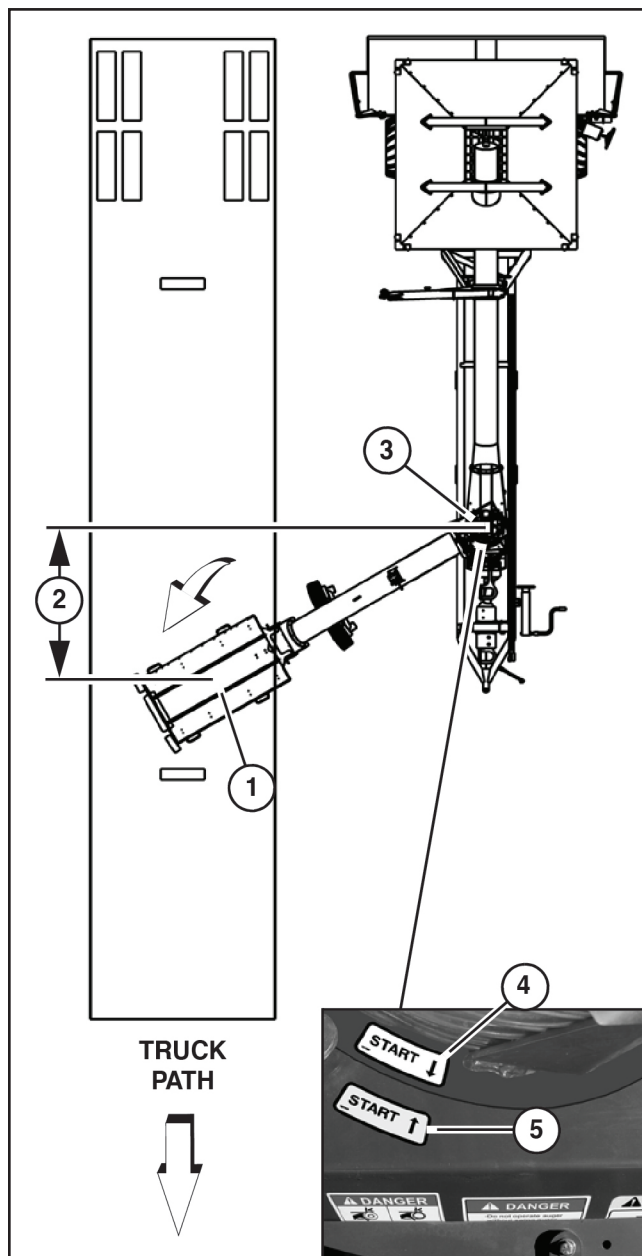


STEP #2 - Move the trailer forward allowing adequate clearance for the hopper (1) to swing under the trailer.

Set-up Instructions

Equipment Positioning (GBL12 Only) (Cont'd)

Swing Auger/Hopper Position

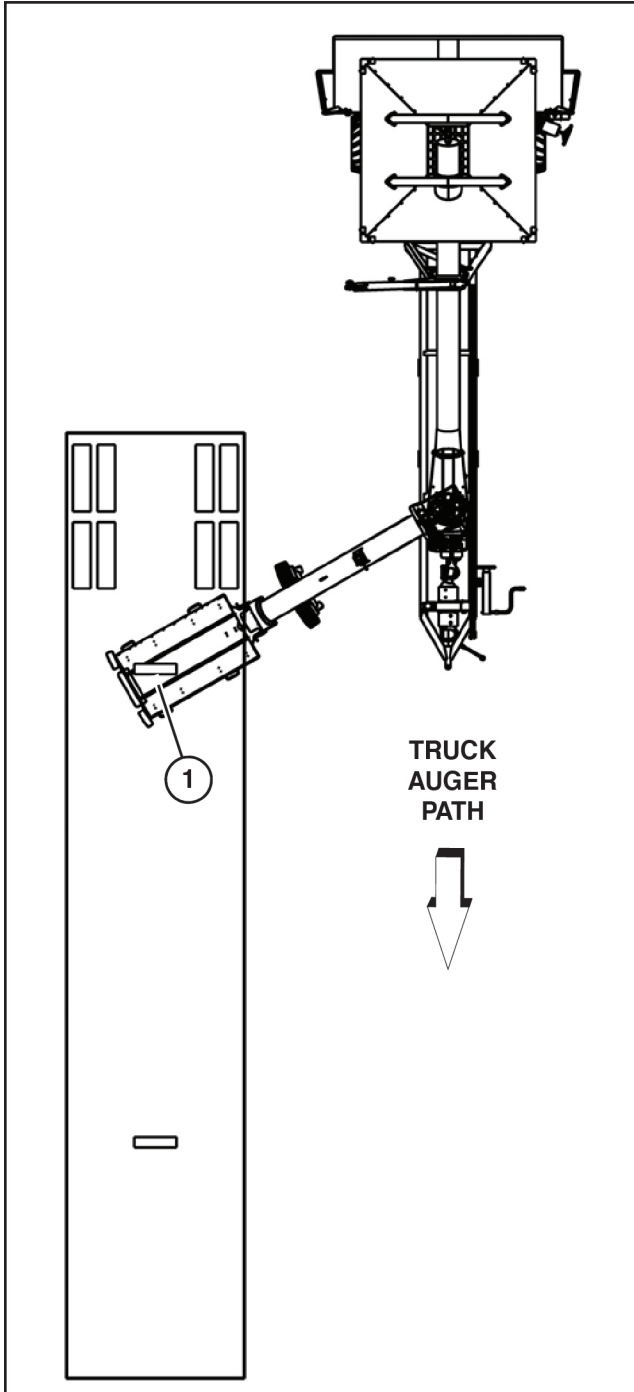


STEP #3 - Swing the hopper under the trailer and position the swing auger as shown. The center of the swing hopper (1) should be approximately 84" (2) from the swing auger pivot (3). Align the "START" decals on the swing auger (4) and main auger (5).

Set-up Instructions

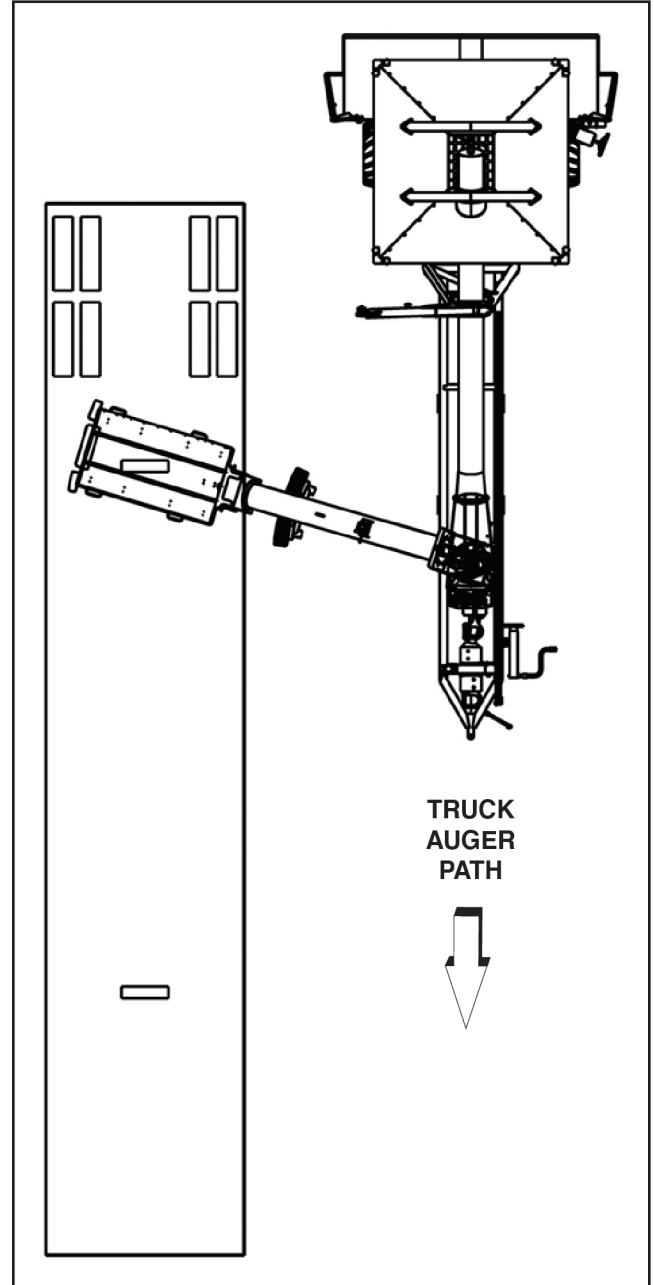
Equipment Positioning (GBL12 Only) (Cont'd)

Rear Compartment Bagging Position



STEP #4 - Move the rear gate (1) of the trailer over the swing hopper.

NOTE: The truck auger will move approximately 11' while the rear trailer compartment is being emptied.



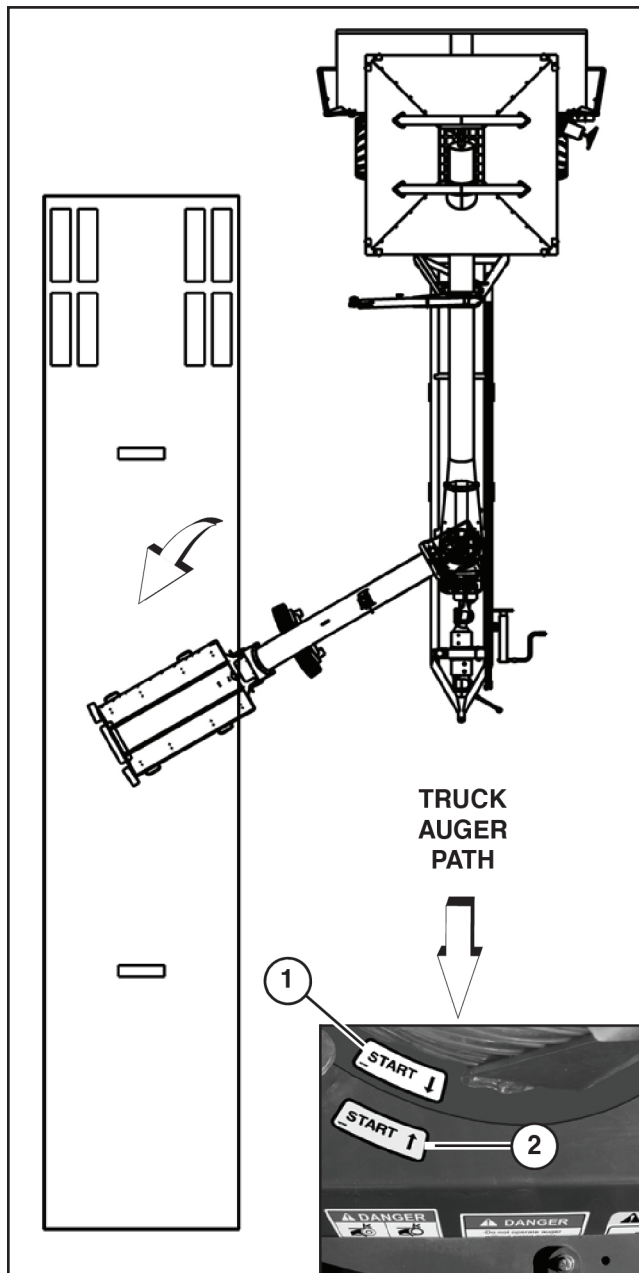
NOTE: The trailer should not have to move while unloading the rear compartment.

STEP #5 - The truck auger will be positioned forward of the rear compartment gate as shown when the compartment is empty.

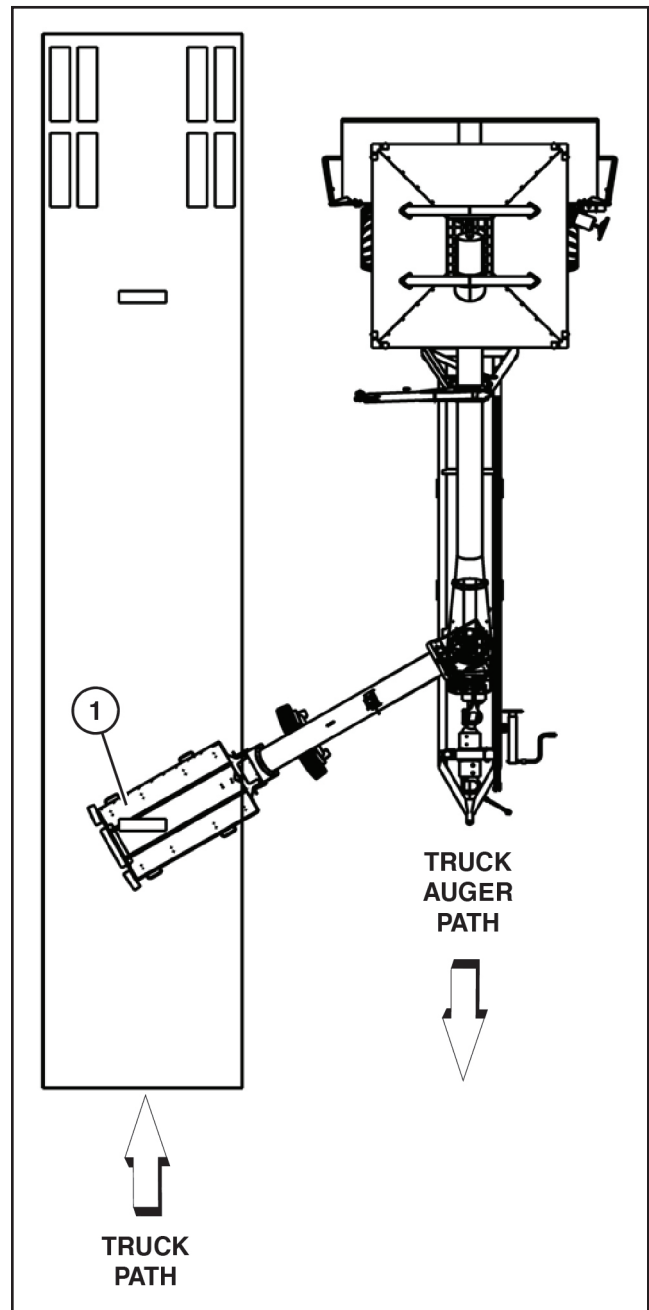
Set-up Instructions

Equipment Positioning (GBL12 Only) (Cont'd)

Front Compartment Bagging Position



STEP #6 - Swing the hopper forward and position the swing auger as shown. Align the "START" decals on the swing auger (1) and main auger (2).



STEP #7 - Move the front gate (1) of the trailer over the swing hopper.

NOTE: The truck auger will move approximately 11' while the front trailer compartment is being emptied.

Getting Started

During the loading process, the operator of the tractor is required to remain in the operator's position at all times to start and stop the PTO shaft and to keep the tractor/grain bag loader moving in a straight line with the grain bag. Position a person along side the grain bag loader (on the side away from the grain loading equipment) to monitor the grain bag and to increase or decrease grain bag loader brake pressure as needed. The operator of the grain transport vehicle is required to remain in the operator's position at all times during the loading process to move the grain transport vehicle and monitor when the vehicle is empty.



WARNING: Do not allow anyone to operate the machine until he or she has read the owner's manual and is completely familiar with all safety precautions.



WARNING: Do not wear loose hanging clothes, neckties, or jewelry. Long hair is to be placed under a cap or hat. These precautions will help prevent you from becoming caught in any moving parts on the machine.



WARNING: Always have an operator in the tractor while the machine is in operation.

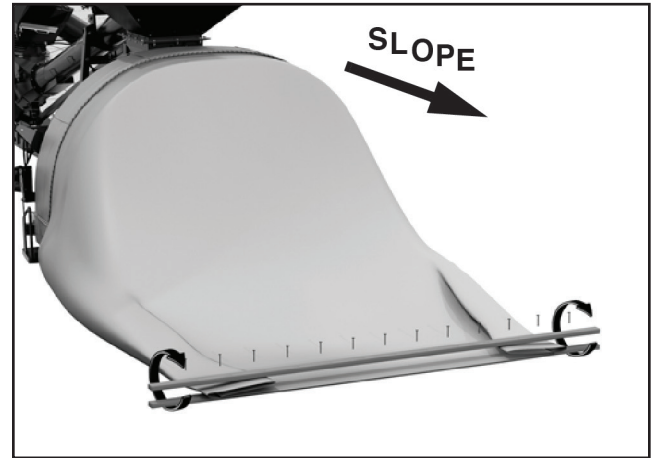


WARNING: The machine requires an operator at all times. Never leave the machine running and unattended.

Install the grain bag loader on the tractor. See "Connecting the Grain Bag Loader" starting on page 33.

Move the tractor and grain bag loader into position.

Sealing The Grain Bag



Remove approximately 10-13 ft. (3.1-3.9 m) of the grain bag from the grain bag loader, align the bag ends and fold the two outer edges of the bag. Start the fold approximately 2 ft. (0.6 m) up on the bag and then fold it towards the center of the bag. Place a board underneath the folded end of the bag (the board should be long enough to reach the entire width of the bag), then place a second board on top of the bag. With the folded end of the grain bag positioned between the two boards, fasten the boards together, flatten the end, roll the sealed end downward a minimum of three times around the boards, and fold it underneath the grain bag as far as possible 3-5 ft. (.9-1.52 m). As the grain bag is being filled, the weight of the grain will provide downward pressure on the seal and help create an additional seal to help prevent moisture from entering the grain bag.

Operating Instructions

Getting Started (Cont'd)

Filling The Grain Bag

- The objective is to fill the bag.
- Fill the bag to the point where no air pockets exist in the bag.
- Do NOT stretch the bag.
- If the bag is over stretched, it may be damaged and split.

NOTE: *Trying to squeeze extra grain into the bag beyond full may cause damage to the grain.*

Move the transport vehicle into position along side the grain bag loader.

Extend the transport vehicle's auger and center it above the hopper on the grain bag loader.

With operator of the tractor in the operator's position, engage the PTO. Gradually increase the PTO speed to 1000 RPM.



Engage the transport vehicle's auger and start loading grain into the hopper of the grain loader.

Check the bag seal as the grain begins to flow into the grain bag to assure that fold remains underneath, and that the grain is flowing to the end of the bag creating the seal.

Adjusting The Bag Pan Height

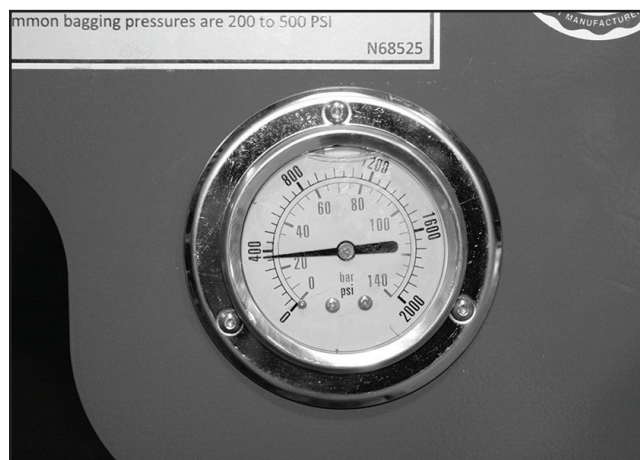
Using the tractor's hydraulics, raise or lower the machine so that the bag pan height is 8-10 in. (20.3-25.4 cm) above the ground.

Adjusting Brake Pressure



Turn the wheel clockwise to increase the brake pressure.

NOTE: *Adjusting the brake pressure will help maintain proper filling of the grain bags, decreasing the chance of damage to the bag during the loading and storage of the bag.*



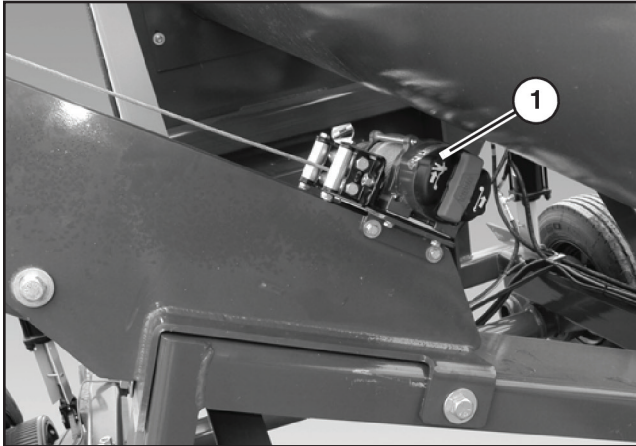
It is recommended to operate the brake pressure between 200–400 PSI.

NOTE: *DO NOT exceed 1000 PSI!*

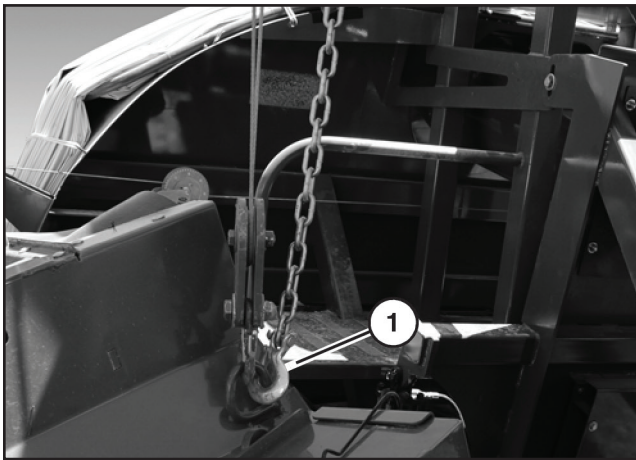
See “End of Bag Loading” on page 49 when bag is full or bagging is completed.

Getting Started (Cont'd)

Lowering The Swing Auger (GBL12 only)

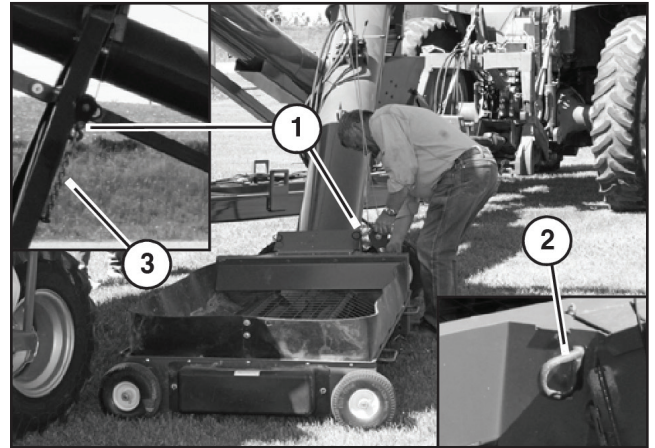


Use the electric winch (1) to raise the swing hopper and remove tension from the upper transport chain.

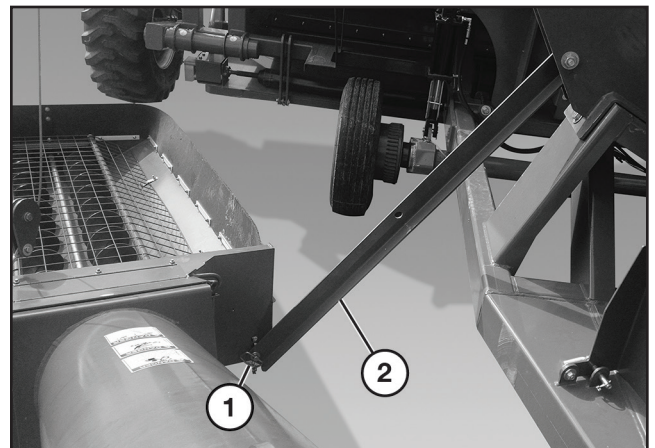


Disconnect the upper transport chain (1).

Use the electric winch to lower the swing hopper to the ground.



Disconnect the transport winch cable (1) from the swing hopper support ring (2). Remove slack in the transport winch cable.

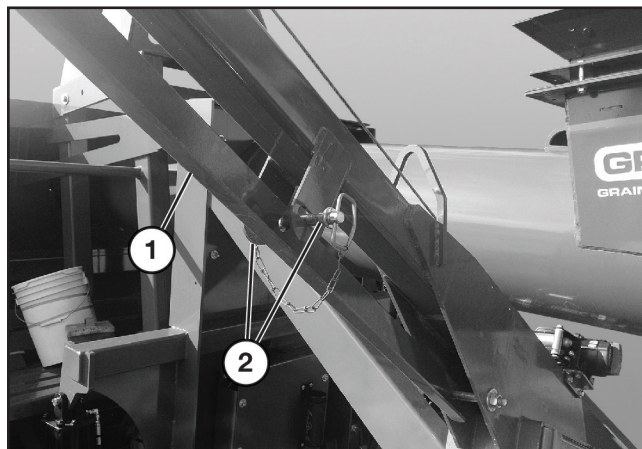


Remove the pin and clip (1) from the brace (2) supporting the swing hopper.

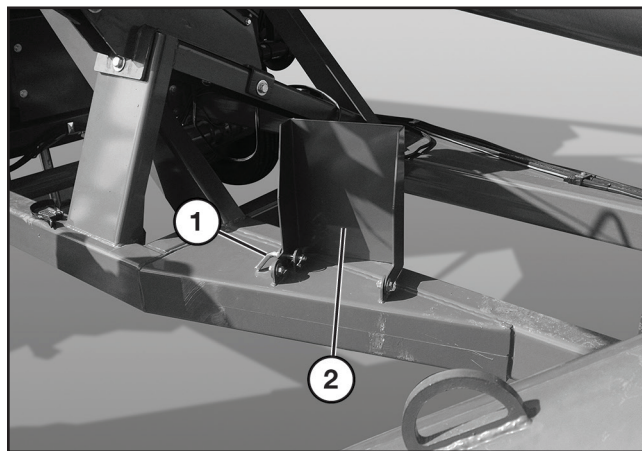
Operating Instructions

Getting Started (Cont'd)

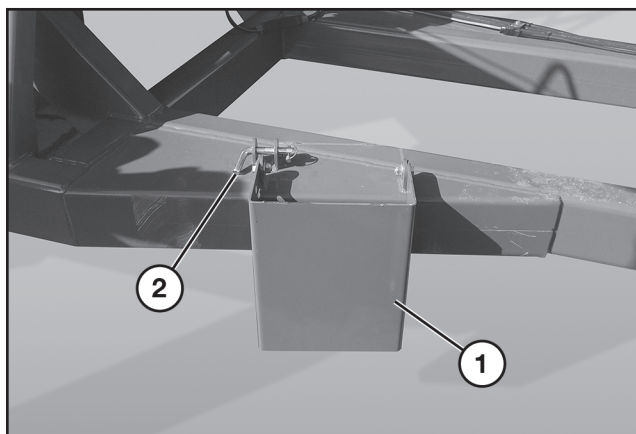
Lowering The Swing Auger (GBL12 only) (Cont'd)



Place the brace (1) in its storage location and secure in place with pin and clip (2).



Remove the pin and clip (1) from the auger stop (2).



Place the auger stop (1) in its operation position and secure in place with pin and clip (2).

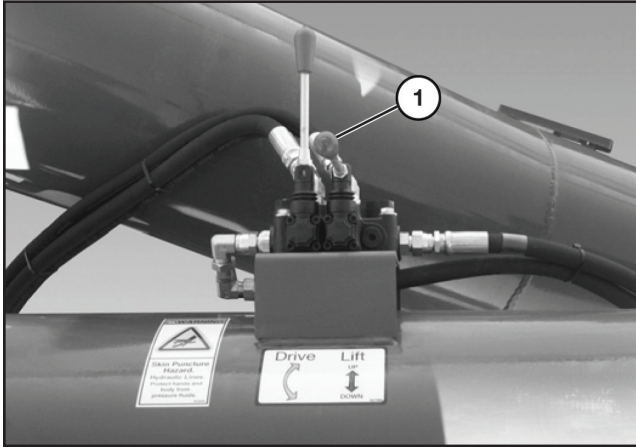
Install the auxiliary hydraulic hoses to the tractor.

Start the tractor engine and engage auxiliary hydraulics.

Getting Started (Cont'd)

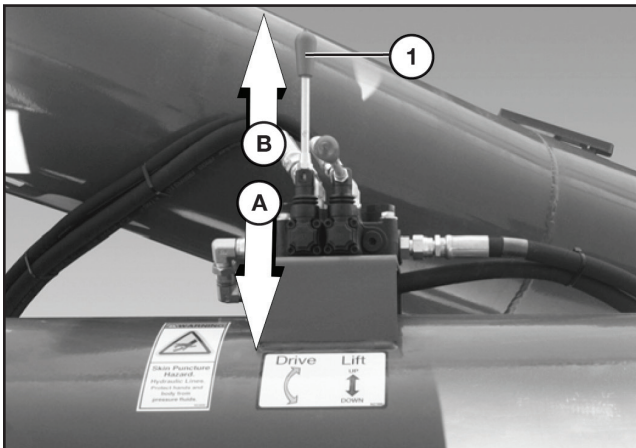
Swing Hopper Controls (GBL12 only)

Up And Down Movement



Push up on lever (1) to raise the swing hopper. Push down on the lever to lower the swing hopper.

Left And Right Movement



Move lever (1) in (A) (towards operator) to move the swing hopper to the left. Move the lever out (B) (away from operator) to move the swing hopper to the right.

Operating Instructions

Getting Started (Cont'd)

Loading The Grain Bag (GBL12 only)



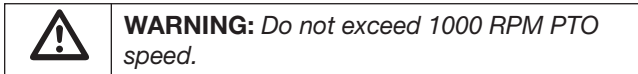
Align “START” decals.



Align the rear compartment of the trailer over the swing hopper. See “Equipment Positioning (GBL12 Only)” on page 39 for alignment instructions.

Engage the tractor PTO slowly to start auger rotation.

NOTE: *Always engage the PTO at idle speed to prevent unnecessary stress to the driveline.*



Slowly open the rear compartment door.

Adjust door opening until the augers can move the grain from the swing hopper to the top (main) hopper without over-flowing the swing hopper.



WARNING: *Never step over or crawl around the equipment while the PTO is engaged; entanglement could occur.*

Once the rear compartment is emptied, disengage the PTO and close the compartment door.

Align “START” decals.

Align the front compartment of the trailer over the swing hopper.

NOTE: *Engage the tractor PTO slowly to start auger rotation.*



WARNING: *Do not exceed 1000 RPM PTO speed.*

Slowly open the front compartment door.

Adjust door opening until the augers can move the grain from the swing hopper to the top (main) hopper without over-flowing the swing hopper.

Once the front compartment is emptied, disengage the PTO and close the compartment door.

Move the swing hopper out from under the trailer.

Disengage the tractor auxiliary hydraulics and turn engine “OFF”.

Operating Instructions

End of Bag Loading

Releasing Brake Pressure

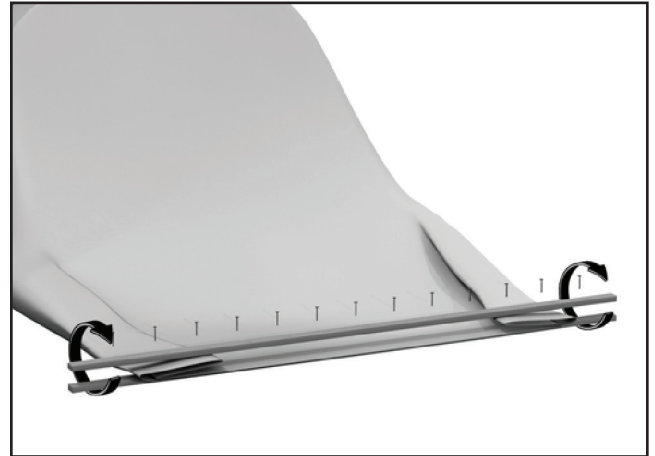


Turn the wheel counterclockwise to decrease the brake pressure.

Important Brake Operation!
Read before operating or moving the machine
Before Moving Machine
Transport machine on transport tires Ensure cylinder stop is in place
DO NOT EXCEED 20 MPH when towing
Before Bagging Material
Read and understand the operators manual Bag uphill to reduce brake pressure requirements
DO NOT EXCEED 1000 PSI
Over-pressure damages calipers and master cylinder Lower pressures minimize grain damage Common bagging pressures are 200 to 500 PSI
N68525

Sealing The Grain Bag

NOTE: When the grain bag is full, seal the bag as soon as possible to eliminate the chance of excess moisture entering the bag and damaging the grain.



Leave approximately 10-13 ft. (3.1-3.9 m) of the grain bag empty for sealing.

NOTE: The entire 10-13 ft. (3.1-3.9 m) of unused bag is not needed for sealing the bag but will aid in the unloading process.

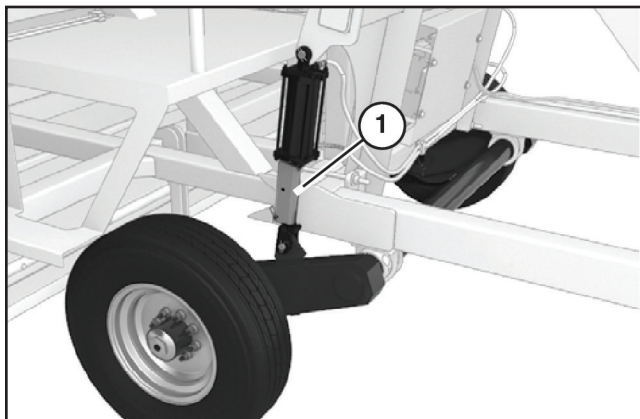
Seal the grain bag with the same procedure used when starting a new grain bag. See "Sealing The Grain Bag" on page 43.

Once the loaded grain bag has been sealed, it is recommended that heavy items such as used tires be place over the finished end to cover any loose parts of the bag end. Also inspect the grain bag for any loose creases and tape them down.

Operating Instructions

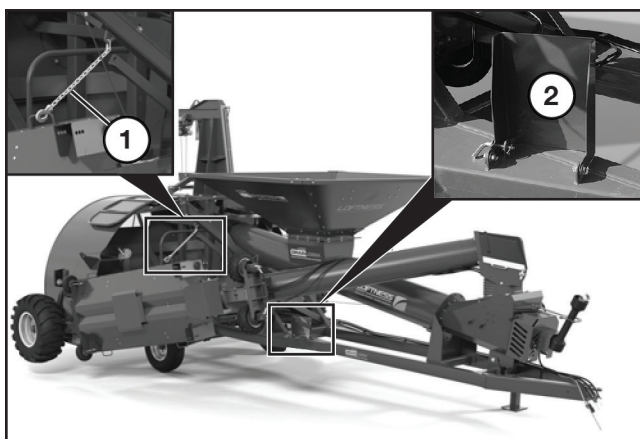
Switching to Transport Position

Procedure



Fully raise the transport axle into the transport position. Install the cylinder stops (1). Lower the transport axle until cylinder contacts the cylinder stop.

For GBL12 Only



Fully raise the swing auger/hopper into the transport position with the safety chain (1) installed. Place the auger stop (2) into the transport position.



GBL12 shown in the transport position.

General Maintenance

See "Maintenance Safety" on page 5 before performing any service or maintenance on the grain bag loader.



WARNING: Always shut down the tractor, remove the ignition key, set the park brake and remove the PTO shaft from the tractor before performing any inspections or maintenance.

To ensure efficient operation, you should inspect, lubricate, and make necessary adjustments and repairs at regular intervals. Parts that are starting to show wear should be ordered ahead of time, before a costly breakdown occurs and you have to wait for replacement parts. Keep good maintenance records, and adequately clean your grain bag loader after each use.

Proper lubrication is important. Too little lubricant will cause premature failure of a bearing. Too much lubrication usually causes high operating temperature and early failure of seals. Follow all lubrication instructions and schedules included in this section.

Maintenance Schedule

HOURS	SERVICE POINTS	SERVICE REQUIRED	PAGE #
		CHECK	
Every 50	Swing Hopper Drive Chains	X	58
	Lower Gearbox	X	56
	Upper Gearbox	X	57
	Brake Pads	X	59
	Safety Labels	X	6
Every 100	Hoses and Wiring	X	
	Oil Leaks	X	
	Wheel Bearings	X	
	Reduction Gearbox Oil	X	57

Fluids And Lubricants



CAUTION: Use proper safety procedures when handling petroleum products including, but not limited to, the use of rubber gloves and eye protection.

Proper lubrication is important. Too little lubricant will cause premature failure of a bearing. Too much lubrication usually causes high operating temperature and early failure of seals. Follow all lubrication instructions and schedules included in this section.

1. Grease - Use an SAE multipurpose high temperature grease with extreme-pressure (EP) rating. Also acceptable is an SAE multipurpose lithium based grease.
2. Brake System - Use DOT 3 brake fluid.
3. Main Auger Helical Gearbox - Use non-synthetic industrial 220 gear oil.
4. Lower And Upper Gearboxes - Require EP90 gear oil.
5. Storing Lubricants - Your machine can operate at top efficiency only if clean lubricants are used. Use clean containers to handle all lubricants. Store them in an area protected from dust, moisture and other contaminants.

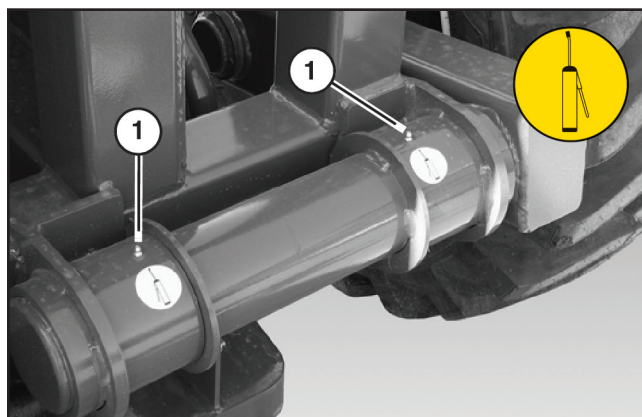
Maintenance

Lubrication

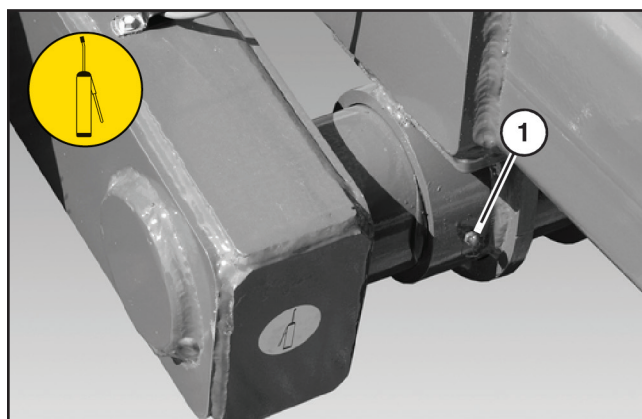
Grease Points

Use a SAE or #2 general purpose lithium based grease unless noted otherwise.

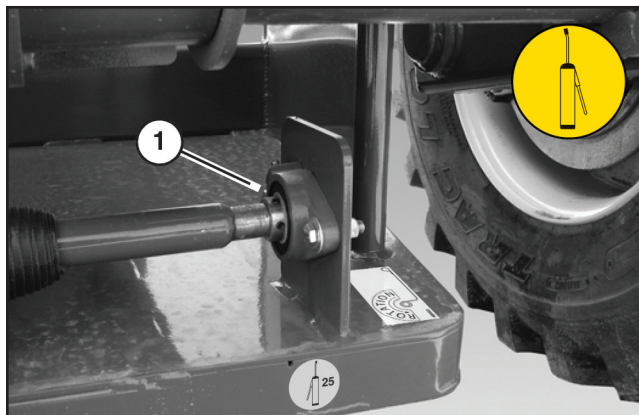
NOTE: See pages 12 and 13 for component location and identification.



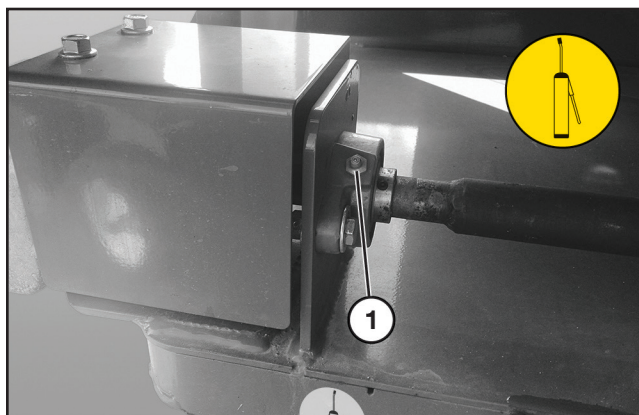
Location: Traction wheel axle (1) (both sides).
Interval: Every 20 hours of operation.



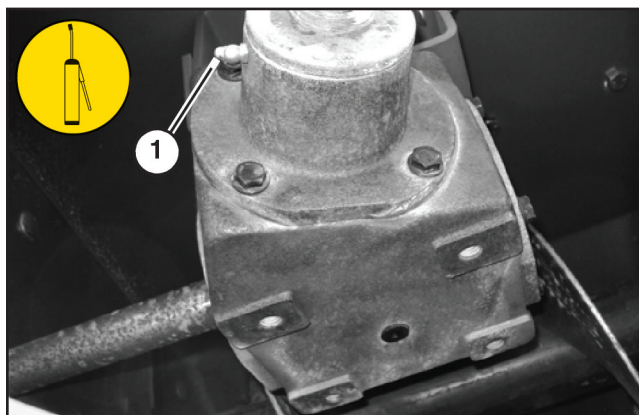
Location: Transport wheel axle (1) (both sides).
Interval: Every 20 hours of operation.



Location: Left side bag pan tarp bearing (1).
Interval: Every 20 hours of operation.



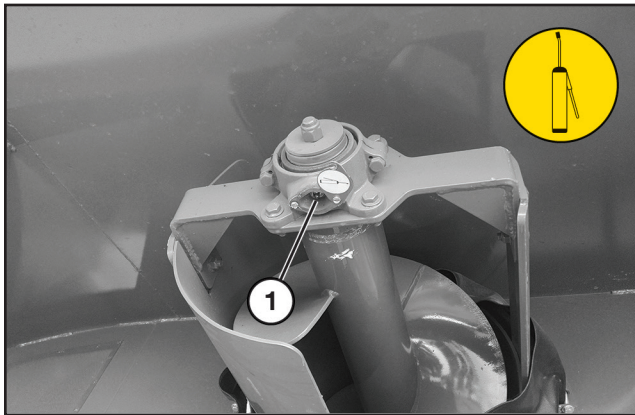
Location: Right side bag pan tarp bearing (1).
Interval: Every 20 hours of operation.



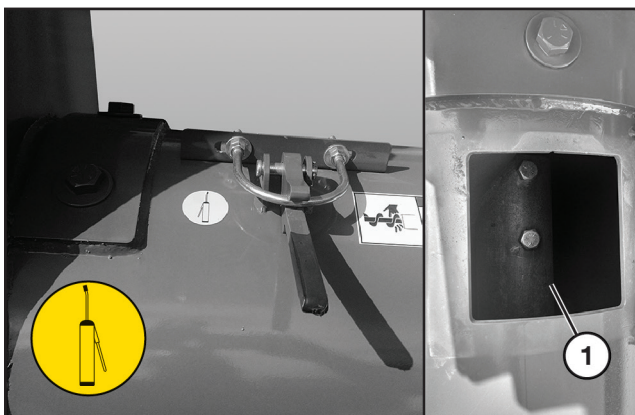
Location: Main auger gearbox (1). GBL12 only.
Interval: Every 50 hours of operation or annually.

Lubrication (Cont'd)

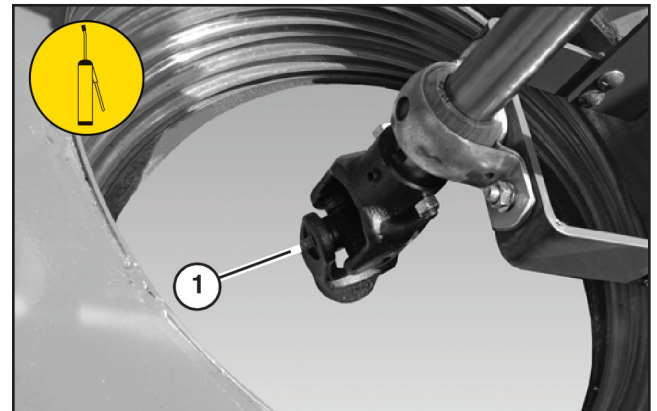
Grease Points (Cont'd)



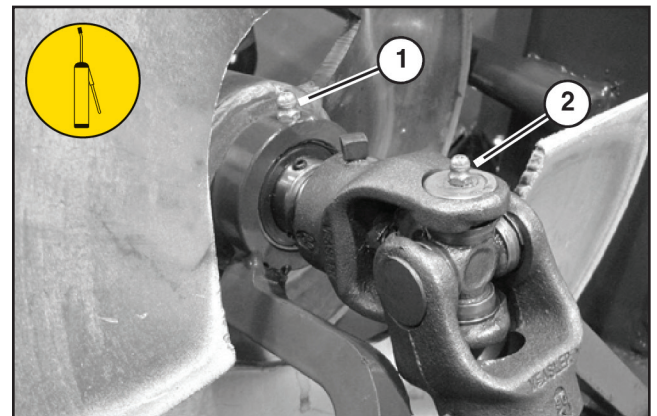
Location: Discharge auger bearing (1).
Interval: Every 50 hours of operation.



Location: Auger (1). Access via auger cleanout door on underside of shaft. GBL12 only.
Interval: Every 20 hours of operation.



Location: Swing u-joint (1). GBL12 only.
Interval: Every 8 hours of operation.

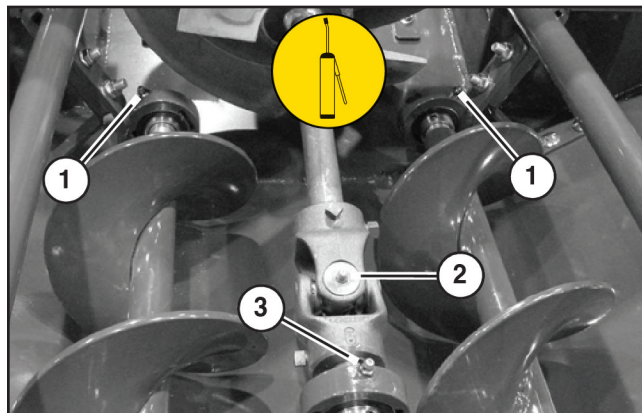


Location: Transition mount (1) and u-joint (2). GBL12 only.
Interval: Every 8 hours of operation.

Maintenance

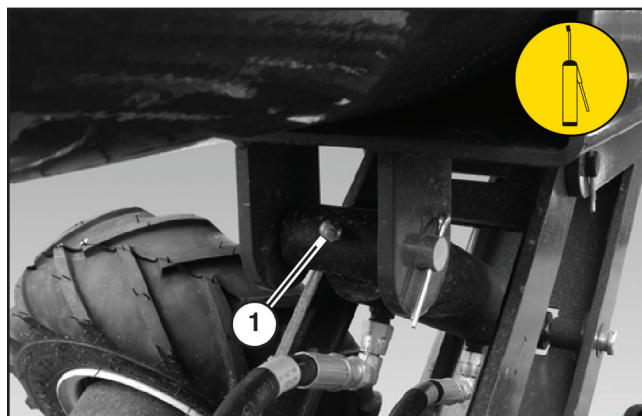
Lubrication (Cont'd)

Grease Points (Cont'd)



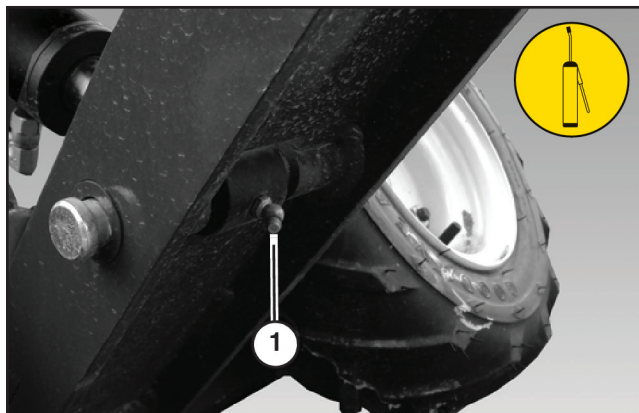
Location: Flight hanger (1), u-joint (2) and hopper drive shaft mount (3). GBL12 only.

Interval: Every 8 hours of operation.



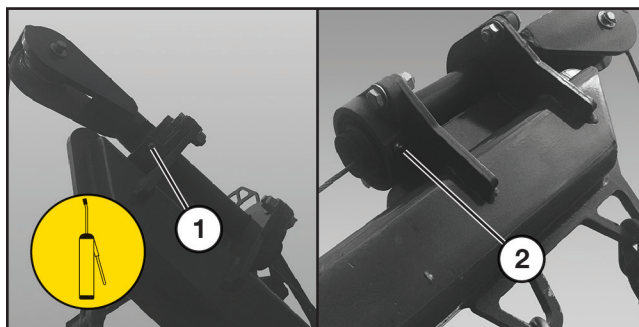
Location: Swing cylinder base end (1). GBL12 only.

Interval: Every 50 hours of operation.



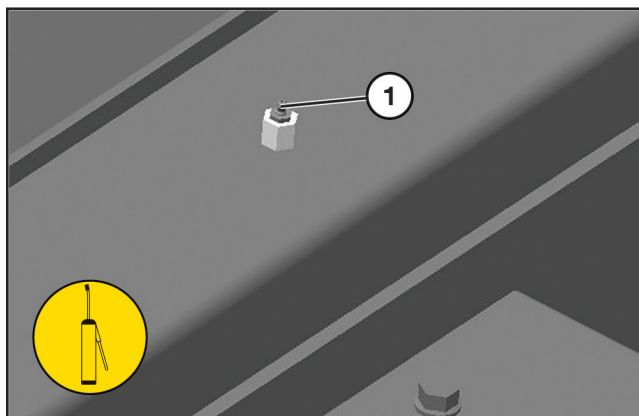
Location: Swing cylinder rod end (1). GBL12 only.

Interval: Every 50 hours of operation.



Location: End of swing auger lift arm, (1 and 2). GBL12 only.

Interval: Every 50 hours of operation.

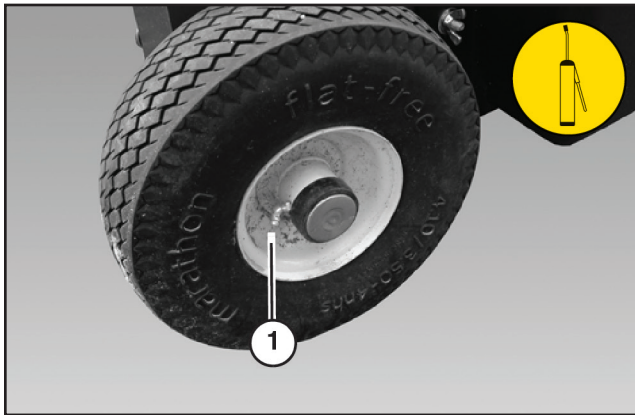


Location: Top of boot mount (1). GBL12C only.

Interval: Every 20 hours of operation.

Lubrication (Cont'd)

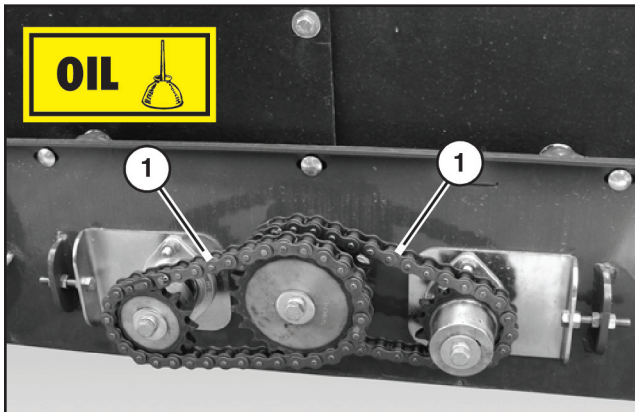
Grease Points (Cont'd)



Location: Swing hopper tires (1). GBL12 only.

Interval: Every 50 hours of operation or annually.

Oil Points

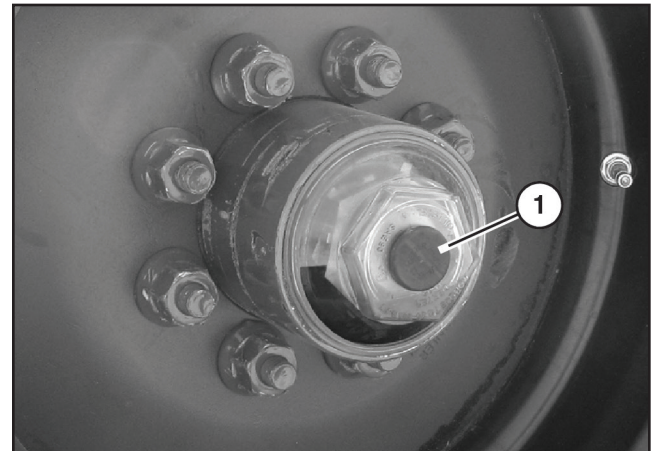


Location: Swing hopper drive chains (1). 30W oil or chain lubricant. GBL12 only.

Interval: Every 40 hours of operation.

Transport Wheel Hub

Checking Gear Lube



Remove the plug (1), the fluid level should be approximately 6.35 mm (1/4") below the bottom of the plug hole. If the fluid level is low, add 80W90 gear lube.

Adding Gear Lube

Remove the plug (1). Add a small amount of 80W90 at a time, allowing the gear lube to settle. Add gear oil until the gear oil is approximately 6.35 mm (1/4") below the bottom of the plug hole.

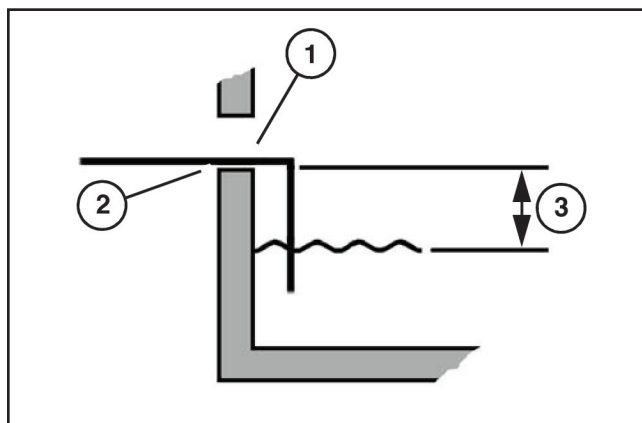
Maintenance

Gearbox

Checking Gearbox Oil Levels

NOTE: Always check the gearbox oil levels with the truck auger in the transport or working position.

Use the following procedure for the main auger helical and upper gearboxes only.



Bend a piece of wire (1) at a 90° angle. Place a mark on the wire bend at the desired height.

NOTE: Use individual wires with the desired height marked for each gearbox being checked.

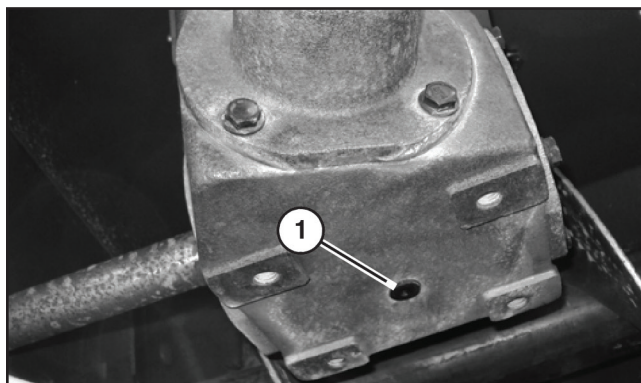
- **Main Auger Helical Gearbox Oil Level** - 76 mm (3") below the fill hole.
- **Upper Gearbox Oil Level (GBL12 only)** - 38 mm (1-1/2") below the fill hole.

Insert the wire into the gearbox. Rest the wire on the bottom (2) of the fill hole and wire pointing downward.

Remove the wire. If the oil level (3) is below the mark on the wire, add gear oil to the correct level.

Lower Gearbox (GBL12 only)

NOTE: Check gear oil level every 50 hours of operation or annually.



Remove the plug (1) from the gearbox.

The gear oil should be level with the bottom of the fill hole.

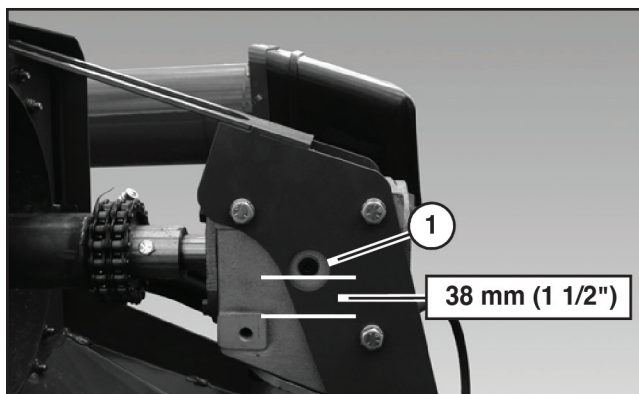
Add gear oil (if necessary) to the correct level and install plug.

NOTE: The lower gearbox requires 700 ml (24 oz.) of EP90 gear oil.

Gearbox (Cont'd)

Upper Gearbox (GBL12 only)

NOTE: Check gear oil level every 50 hours of operation or annually.



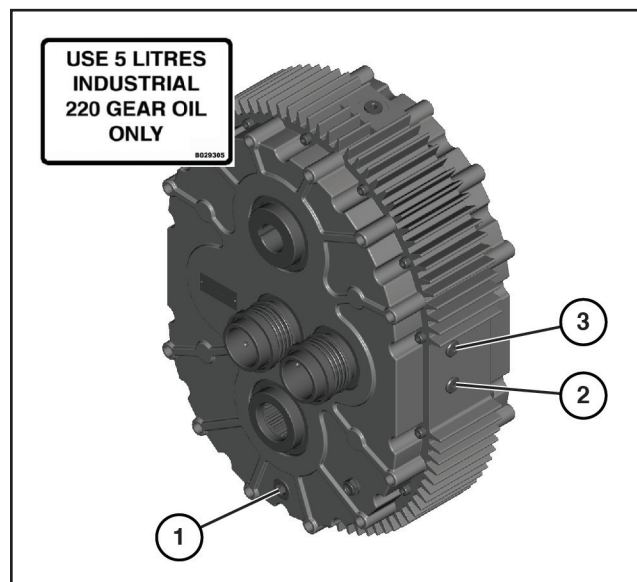
Remove the plug (1) from the gearbox.

The gear oil should be approximately 38 mm (1 1/2") below the bottom of the fill hole.

Add gear oil (if necessary) to the correct level and install plug.

NOTE: The upper gearbox requires 700 ml (24 oz.) of EP90 gear oil.

Main Auger Helical Gearbox



NOTE: Check the main auger helical gearbox oil level every 100 hours.

The gear oil should be level with the bottom of the level plug hole (2).

Add gear oil (if necessary) to the correct level and install plug.

Flush the main auger helical gearbox after the first 50 hours of operation and every 500 hours thereafter.

Flushing The Main Auger Helical Gearbox



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

Remove the plug (1) and fill plug (3). Drain and flush the gearbox.

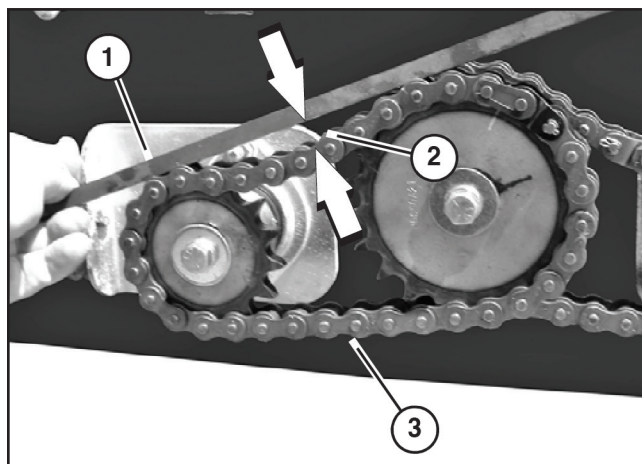
Install plug (1). Remove the level plug (2). Add 169 oz. (5 L) of non-synthetic 80-90w oil. Install plug (2) and fill plug (3).

NOTE: 80-90w oil is equivalent to 220 gear oil.

Maintenance

Swing Hopper Drive Chain (GBL12 only)

Checking Drive Chain Tension (GBL12 only)

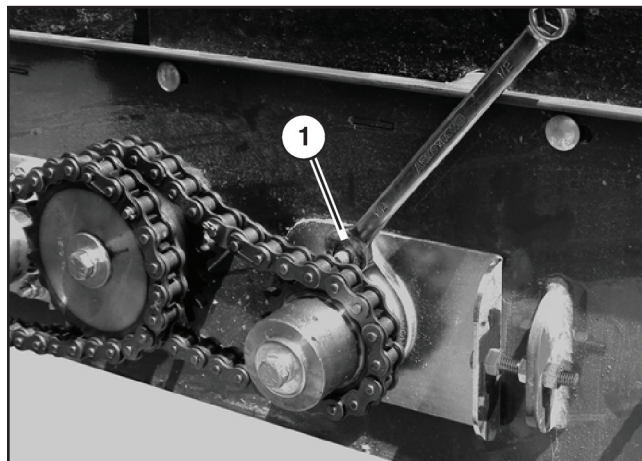


Remove hopper chain guard.

Place a straight edge (1) across the two sprockets and chain.

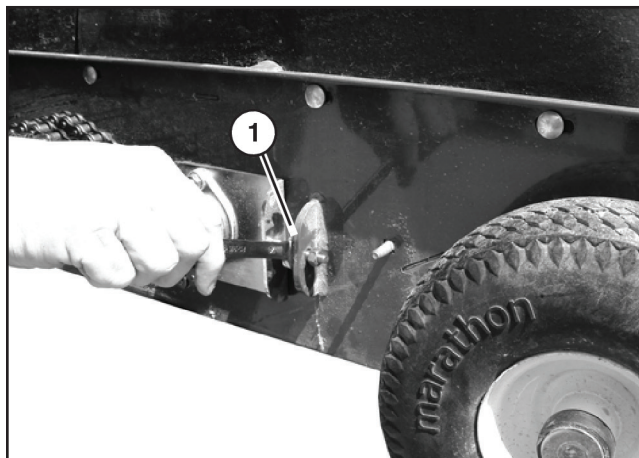
There should be approximately 9.52 mm (3/8") deflection in the top section (2) of the chain and no sag at the bottom section (3). Adjust if necessary.

Adjusting Drive Chain Tension (GBL12 only)

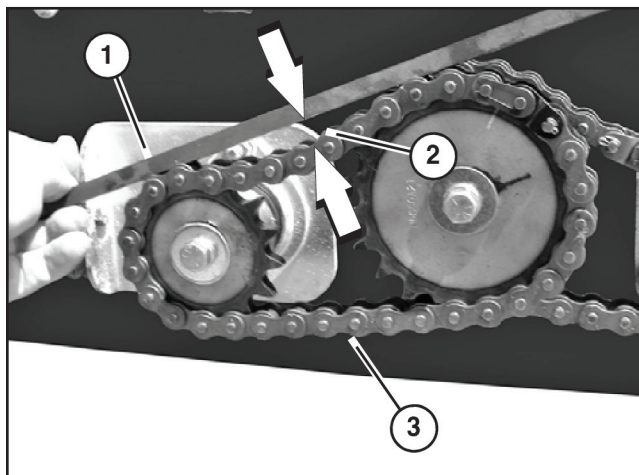


Remove hopper chain guard.

Loosen the two bearing bolts (1).



Loosen the two jam nuts (1) on the adjuster(s).



Place a straight edge (1) across the two sprockets and chain.

Adjust the chain tension until there is approximately 9.52 mm (3/8") deflection in the top section (2) of the chain and no sag at the bottom section (3).

Once the drive chain tension has been adjusted, tighten the two jam nuts and two bearing bolts.

Repeat procedure for second drive chain.

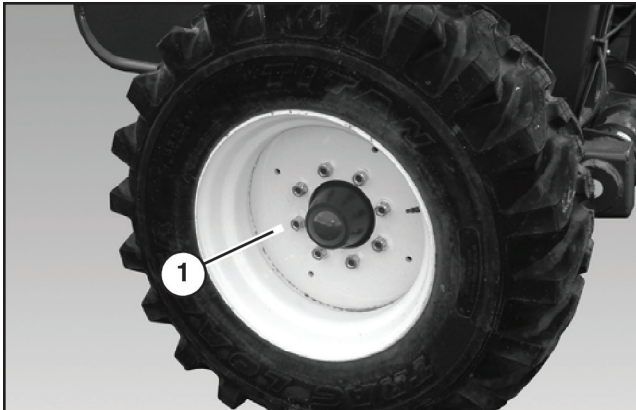
Disc Brakes

Removing The Brake Pads And Calipers



WARNING: Make sure all brake pressure has been removed before servicing wheels, hubs and brakes.

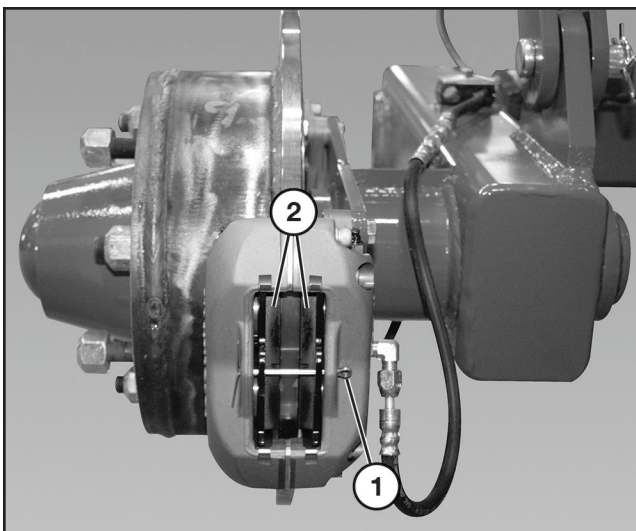
Install a jack or an approved lifting device to the grain bag loader.



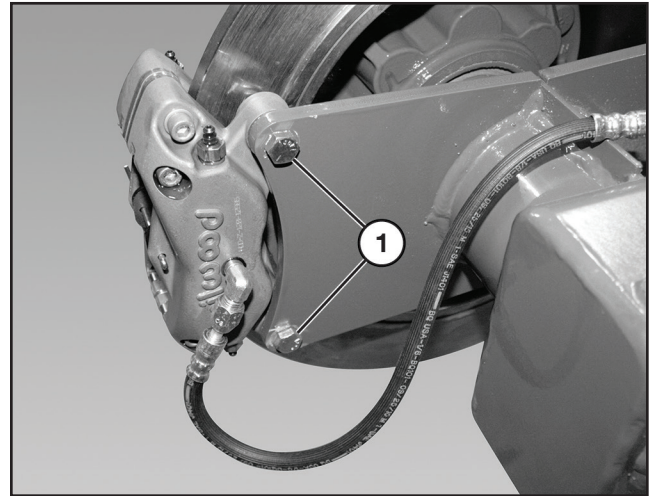
Loosen the eight bolts or lug nuts (1).

Raise the grain bag loader until the wheel is slightly off the ground.

Remove the bolts or lug nuts and wheel.



Remove the cotter pin (1) and brake shoes (2).

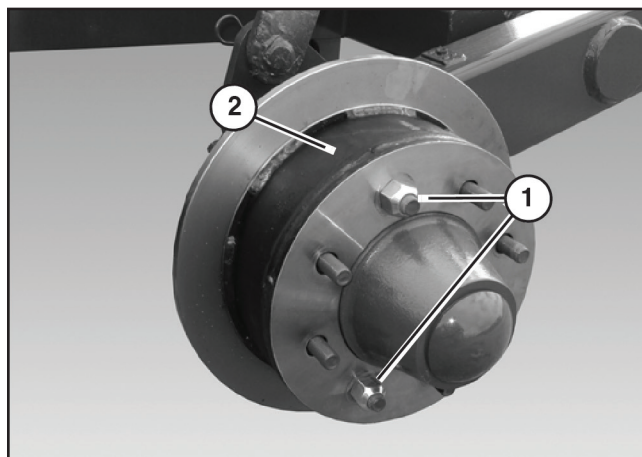


Remove the two nuts and bolts (1) and remove the calipers from the disc.

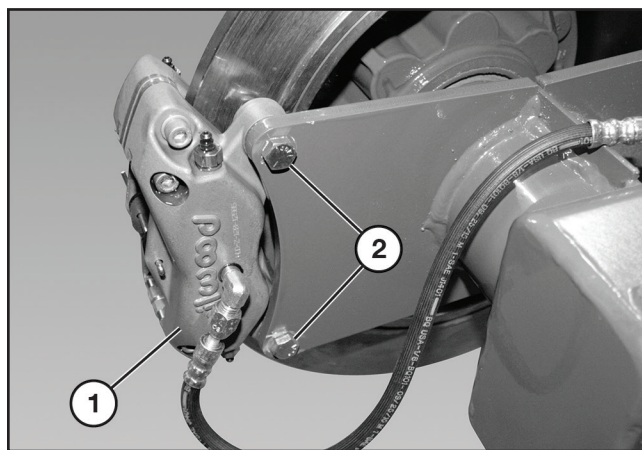
Maintenance

Disc Brakes (Cont'd)

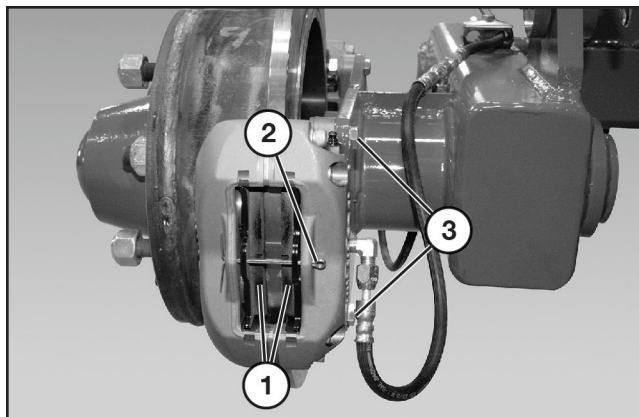
Installing The Calipers And Brake Shoes



Install three bolts or lug nuts (1) to hold the brake drum (2) on the hub. Tighten bolts and nuts.

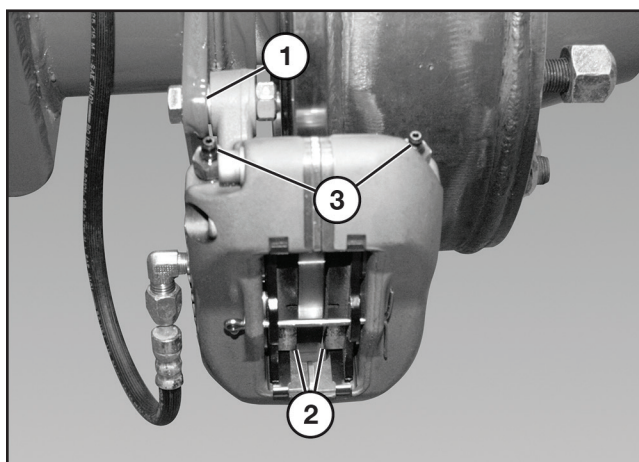


Install the caliper (1) onto the brake drum and insert the two bolts (2) through the mounting bracket on the hub and install nuts. Do not tighten.



Install the brake pads (1) and cotter pin (2).

Tighten the two bolts (3) to the proper torque. See "Torque Specifications" on page 141.



NOTE: It may be necessary to install spacers (1) between the caliper and mounting bracket to maintain even gap (2) on either side of the disc.

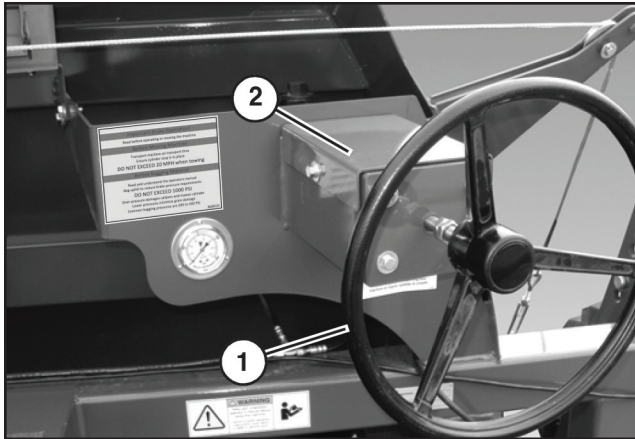
Install and bleed the air from the brake lines.

Each caliper has two bleeder fittings. Bleed both the highest fittings (3) on each side.

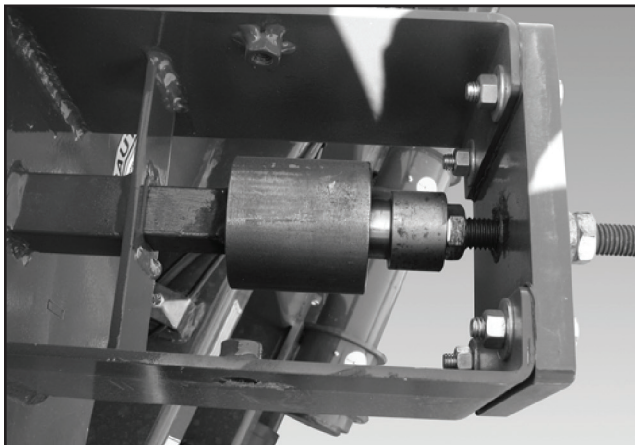
Disc Brakes (Cont'd)

Bleeding The Brake System

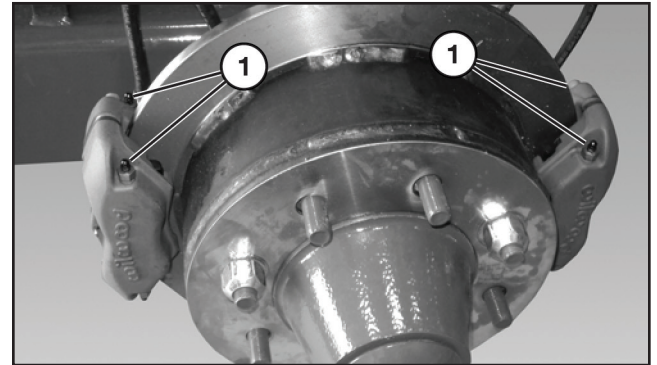
Park the Grain Bag Loader on level ground and turn tractor engine off.



Remove steering wheel (1) & cover(s) (2) before bleeding system.



Using 1/2" auger trap door hinge pin for pumping master cylinder during bleeding procedure.



RH Brake Caliper bleed port(s) (1) shown with the lug tire removed.

NOTE: *Two people are required when bleeding the brakes.*

One person will push on the master cylinder piston, to apply pressure to the system.

The second person will alternately loosen and tighten the four top bleed valve(s) (1) on the RH caliper first.

NOTE: *Open one bleeder valve at a time.*

Brake Bleeding Procedure

NOTE: *Keep the master cylinder reservoir full while bleeding the brake system.*

1. Pump and hold the master cylinder, applying pressure to the brake system.
2. Open one top bleeder valve at a time, allowing air to be released.
3. Close the bleeder valve.

NOTE: *Failure to close the bleeder valve before pressure to master cylinder is released will cause air to be drawn back into the bleeder valve.*

4. Release the pressure on the master cylinder.
5. Push in and hold the master cylinder to apply pressure on the brake system.
6. Open the three remaining bleeder valves (one at a time), allowing air to be released.
7. Close the bleeder valve(s).
8. Release the pressure on the master cylinder.
9. Repeat this procedure until only a smooth stream of fluid exits the bleeder valve.

Repeat the above procedure on the LH Brake Caliper.

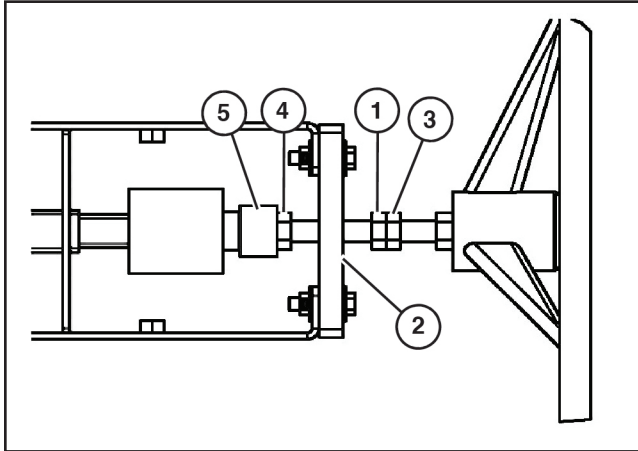
Reinstall the brake steering wheel.

Maintenance

Disc Brakes (Cont'd)

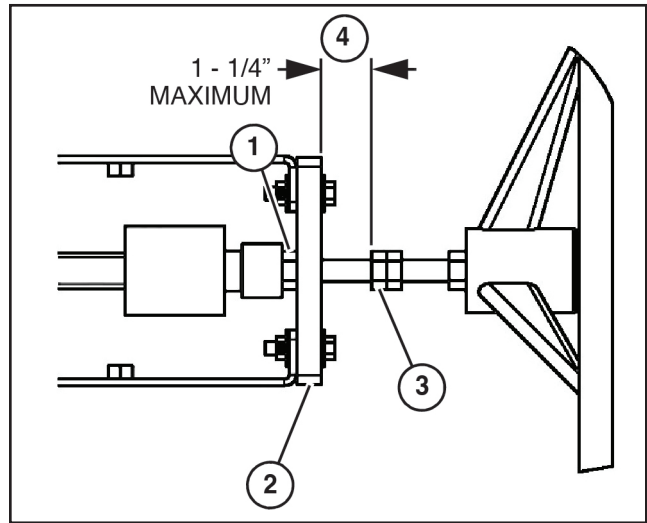
Bleeding The Brake System (Cont'd)

Setting The Brake Pressure



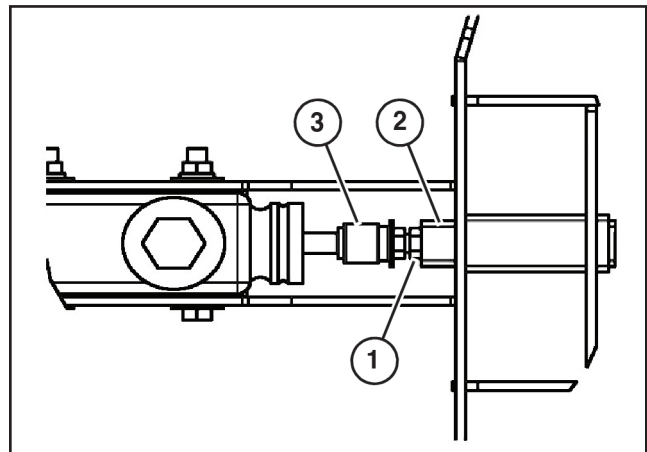
Cycle system 3 times, turning the steering wheel all the way in and back out, but do not exceed 1000 psi. Pressure should build each time. Set pressure to 1000 psi. Tighten 5/8" jam nut (1) to mounting bracket face (2). Tighten second 5/8" jam nut (3) against 5/8" jam nut (1).

If 1000 psi was not attained during initial setup follow this procedure: Loosen 5/8" jam nut (4), hold piston rod assembly (5) and turn steering wheel counter-clockwise two revolutions. Retighten 5/8" jam nut (4). Repeat above procedure until 1000 psi is attained.



Turn steering wheel all the way out until 5/8" jam nut (1) contacts the mechanical stop (2). Verify that the gap between the 5/8" jam nut (3) and the bracket face does not exceed 1-1/4" (4).

NOTE: A gap of more than 1-1/4" can cause severe damage to the braking system.

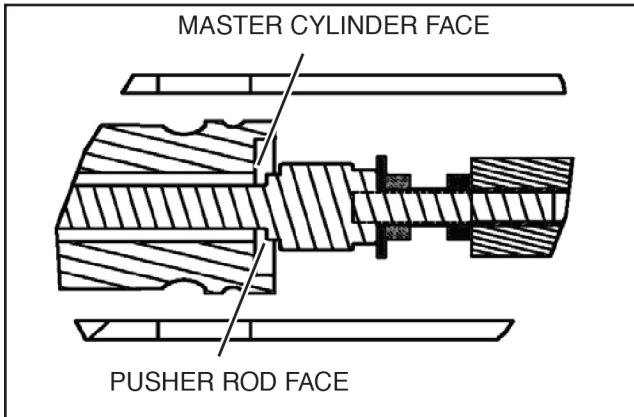


To adjust the pusher rod assembly, loosen the jam nut (1) between the pusher (2) and the rod (3). Turn the rod (3) counter-clockwise until a desired gap is between the jam nut (1) and the pusher (2).

NOTE: Move the rod out (1/8" to 1/4" increments). Any movement over 1/8" to 1/4" might cause damage to the components.

Disc Brakes (Cont'd)

Bleeding The Brake System (Cont'd)



Verify Clearance

Make sure there is a gap between the master cylinder face and the pusher rod face.

Slowly turn the steering wheel in, while watching the pusher rod engage the master cylinder. The jam nut stops should contact the mechanical stop plate before the pusher rod face contacts the master cylinder face. If there is no gap, you may cause damage to your master cylinder.



NOTE: It is normal for pressure to drop off overnight or when left for extended periods of time.

NOTE: Back brake control wheel fully out to the stop before moving grain bag loader (severe heating damage to brakes can occur).

Check brake fluid levels and add brake fluid (DOT 3 fluid) if needed. Level should be 1/4" from top of reservoir.

Brake Pressure Gauge Bleeding Procedure

NOTE: If the pressure gauge by the brake control wheel is not operating correctly, bleed the line to the gauge.

1. Pressurize the system.

NOTE: Remove the gauge mounting bolts before bleeding the line to the gauge.

2. Loosen the fitting at the gauge to bleed the line.

3. Tighten bleed fitting and install gauge mounting bolts.

Install wheel and tighten bolts or lug nuts to the proper torque. See "Torque Specifications" on page 141.

Maintenance

Troubleshooting

PROBLEM	POSSIBLE CAUSE	SOLUTION
PTO driveline vibration.	PTO driveline loose or worn.	Check driveline connection. Tighten and repair as necessary.
	PTO driveline u-joints dry.	Lubricate the u-joints.
	Driveshaft bent.	Replace.
	PTO slide shaft is dry.	Lubricate the shaft with grease.
Reduction box at driveshaft leaking oil.	Oil level too high.	Obtain proper oil level.
	Seals are leaking.	Repair/replace.
	Wrong hydraulic oil being used.	Drain and fill system with Chevron 220 hydraulic oil.
Improper stretch on grain bag.	Brake pressure set too high/low.	Adjust brake pressure.
	Bag tray gap too small/large.	Adjust gap as needed.
	Bagging on too steep of a grade.	Relocate to flatter ground.
	Machine pan clearance to ground improper.	Adjust up or down.
Grain leaking by and filling pan.	Bungy cords not positioned properly.	Reposition bungy cords.
	Bungy cords are too loose.	Tighten bungy cords.
	Bag is bunched up in corner	Raise cradle to take up the bag slack.
	Pan gap set too large.	Decrease pan gap to tunnel.
	Rubber flaps not seated properly.	Verify flaps are not curled up.
	Bagging on a side hill.	Relocate to another area without side-slope
Disc brakes not working properly.	Brake pressure set too high/low.	Adjust brake pressure.
	Air in brakes.	Bleed air from the brake lines.
	Worn brake pads.	Replace brake pads.
	Rotors are rusty.	Clean rotors.
	Rotors are coated with mud.	Clean rotors.
	Brake fluid low.	Add brake fluid.
	Master cylinder failed.	Replace master cylinder.
	Brake pistons not moving.	Clean pistons or rebuild/replace brake caliper.

Troubleshooting (Cont'd)

PROBLEM	POSSIBLE CAUSE	SOLUTION
Disc brakes are hot after towing.	Braking wheels are touching the ground.	Adjust linkage to clear the ground during transport.
		Raise transport axle higher.
Transport brakes not working.	Electrical connections faulty.	Check all wiring and connections.
	Towing vehicle control not working.	Verify wiring and controller operation.
Cradle lift not working.	Winch is not working.	Replace winch.
	Winch is not receiving power.	Replace wiring clean electrical connections.
	Relay is burned out.	Replace relay.
	Relay not receiving a power signal.	Verify signal controller delivering power.
	Signal controller not sending power to the relay to switch.	Replace controller.
		Re-calibrate hand-held transmitter.
	Hand-held controller not sending signal.	Re-calibrate hand-held controller.
		Replace battery in hand-held controller.
	Circuit breaker is tripped.	Reset circuit breaker.
Cradle trolley not working.	Motor is not working.	Replace motor.
	Chain not engaging sprocket.	Repair/adjust.
	Motor is not receiving power.	Replace wiring.
		Clean electrical connections.
	Relay is burned out.	Replace relay.
	Relay not receiving a power signal.	Verify signal controller delivering power.
	Signal controller not sending power to the relay to switch.	Replace controller.
		Re-calibrate hand-held transmitter.
	Hand-held controller not sending signal.	Re-calibrate hand-held controller.
		Replace battery in hand-held controller.
	Fuse is blown at panel.	Replace fuse.

Maintenance

Troubleshooting (Cont'd)

PROBLEM	POSSIBLE CAUSE	SOLUTION
Bag pan tarp not rolling in.	Motor is not working.	Replace motor.
	Motor is not receiving power.	Replace wiring.
		Clean electrical connections.
	Relay is burned out.	Replace relay.
	Relay not receiving a power signal.	Verify signal controller delivering power.
	Signal controller not sending power to the relay to switch.	Replace controller.
		Re-calibrate hand-held transmitter
	Hand-held controller not sending signal	Re-calibrate hand-held controller
		Replace battery in hand-held controller
	Rivets at winding tube torn loose.	Replace rivets
Truck auger throwing material out of hopper	Motor to tube connection separated.	Repair/replace.
	Fuse is blown at panel.	Replace fuse.
Truck pan bearings for twin augers hot.	Auger speed too fast.	Reduce PTO speed.
	Chain is too tight.	Loosen/slacken the chain.
	Bearings not greased.	Lubricate bearings.
	Chain alignment is incorrect.	Adjust sprockets to line up chain.
Hopper adjust wheels not turning.	Auger shaft has slid on its bearings.	adjust/repair/replace.
	Valve not set to open center or pressure compensated operation.	Factory set as pressure compensated.
		Change if needed.
	Tractor relief too low	Verify tractor pressure setting.
	Orifice at valve inlet plugged	Clean orifice.
	Motor failed	Replace motor.
Hopper wheel cylinder up/down not working.	Pinched hose	Inspect/repair/replace.
	Valve not set to open center or pressure compensated operation.	Factory set as pressure compensated.
		Change if needed.
	Tractor relief too low.	Verify tractor pressure setting.
	Orifice at valve inlet plugged.	Clean orifice.
	Cylinder failed.	Replace cylinder.
	Pinched hose.	Inspect/repair/replace.

Troubleshooting (Cont'd)

PROBLEM	POSSIBLE CAUSE	SOLUTION
Swing auger making noise.	Running with pan at top of cylinder stroke.	Use hydraulics to lower the pan.
	Chain connection worn.	Inspect/repair/replace.
	Lower shaft rusted to u-joint.	Clean connection, u-joint is designed to slide on the shaft (no set screws).
Main auger is making noise	Bearing at hopper is dry.	Lubricate/inspect/replace.
	Bearing support at hopper has shifted.	Readjust/tighten bolts.
	Bearing at hopper has failed.	Replace bearing.
	Bearing at discharge end is dry.	Lubricate/inspect/replace.
	Bearing at discharge end failed.	Replace bearing.
	Foreign material stuck in auger.	Inspect and remove foreign material.
	Worn auger.	Replace auger.

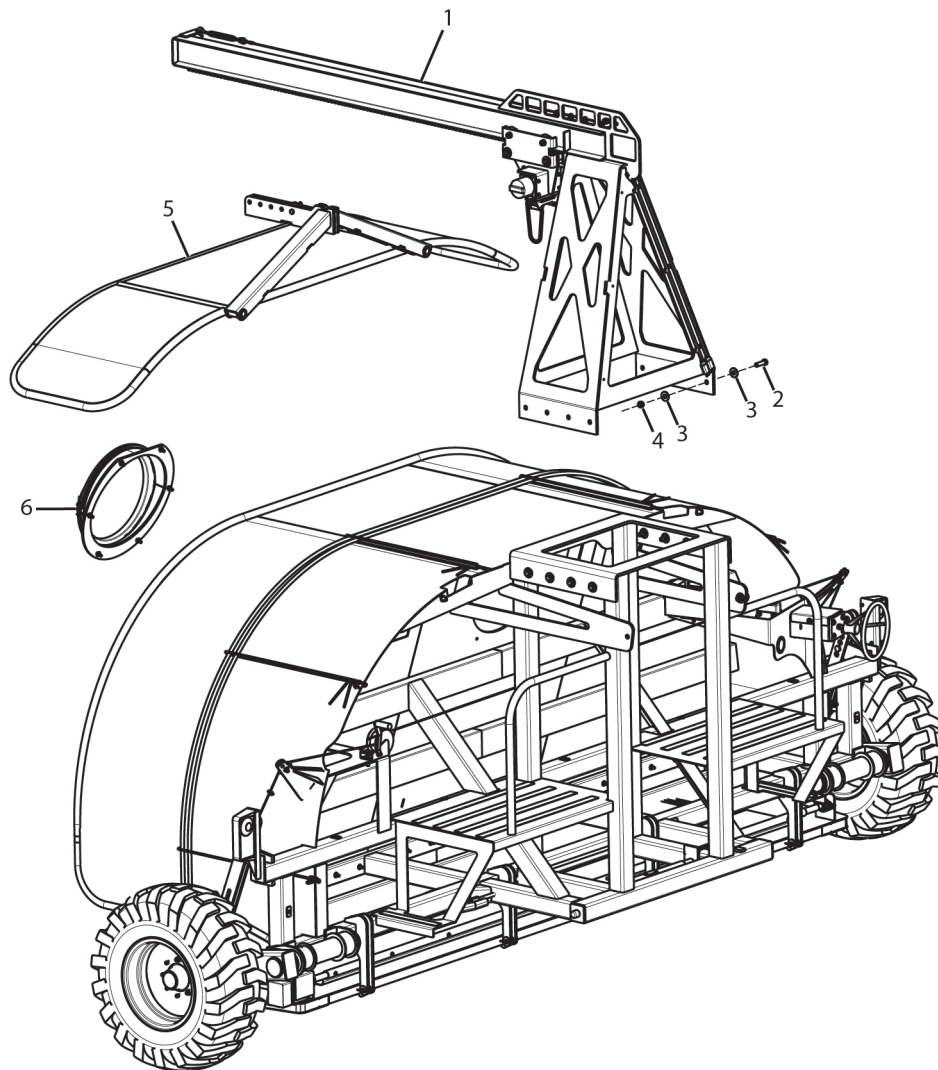




PARTS IDENTIFICATION AND SCHEMATICS

Parts Identification

Base Assembly - GBL12 and GBL12C



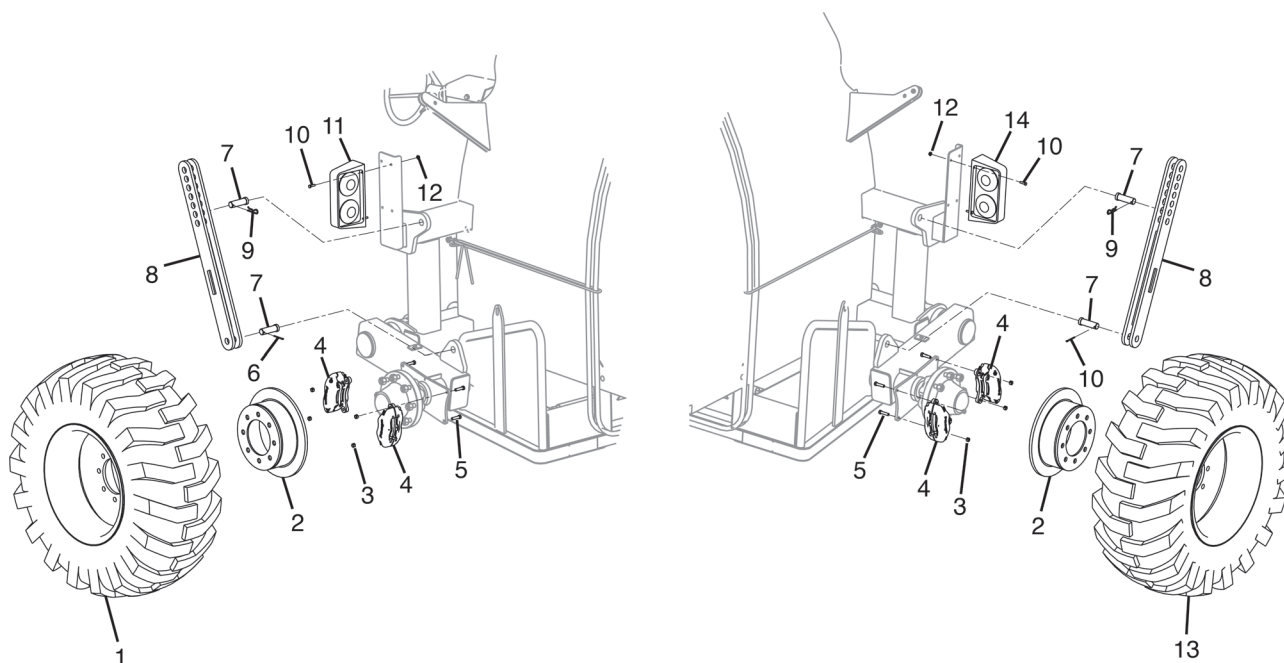
For parts breakdown of item 1 (N40131), see page 83.

For parts breakdown of item 5 (N33583), see page 80.

For parts breakdown of item 6 (N30629), see page 82.

#	QTY.	PART #	DESCRIPTION
1	1	N40131	CRANE, GBL 12
2	8	4224	BOLT, 3/4" X 2-1/2" GRADE 5
3	16	4071	WASHER, 3/4" FLAT
4	8	4056	NUT, LOCK 3/4
5	1	N33583	CRADLE, GBL12 ONE PIECE
6	1	N30629	GROUP, GBL12 AUG BODY SLEEVE

Base Assembly (Cont'd) - GBL12 and GBL12C



#	QTY.	PART #	DESCRIPTION
1	1	N27159	WHEEL,15-19.5 LEFT 11.75"RIM
2	2	N27154	ROTOR, GBL BRAKE 16" CAST
3	8	4052	NUT, LOCK 3/8"
4	4	N22794	CALIPER, WILLWOOD BRAKE
5	8	4006	BOLT, 3/8" X 1-1/2" GRADE
6	2	4092	PIN COTTER 5/32" X 2"
7	4	4315	PIN, 1" X 2-1/2"
8	2	N27816	LINK, GBL12 AXLE
9	2	4393	CLIP, HAIRPIN 5/32" X 2-1/2"
10	8	4000	BOLT, 1/4" X 1" GRADE 5
11	1	N16289	LIGHT, LEFT
12	8	N105230	NUT, LOCK 1/4" SER FLANGE
13	1	N27158	WHEEL,15-19.5 RIGHT 11.75"RIM
14	1	N16290	LIGHT, RIGHT
Not Shown	2 Sets	N23995	PADS, WILWOOD BRAKE

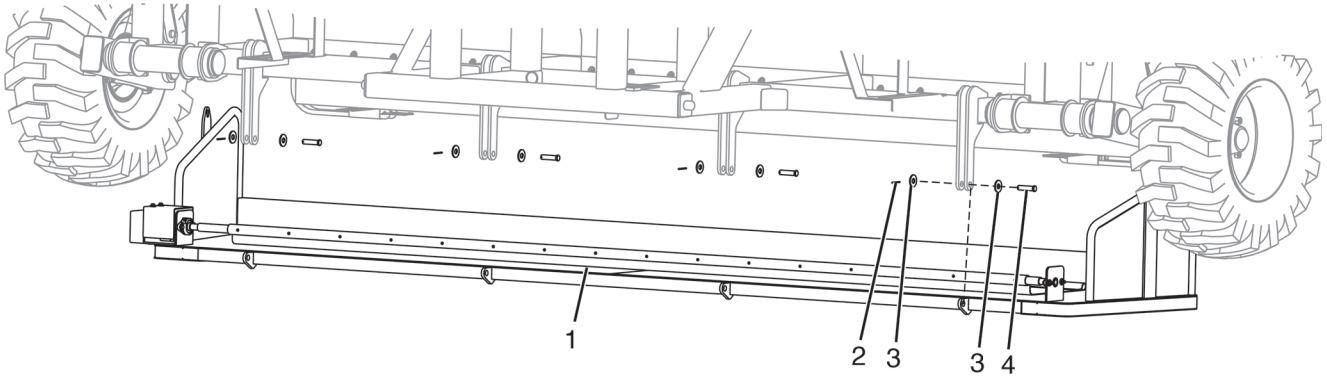


Base Assembly (Cont'd) - GBL12 and GBL12C

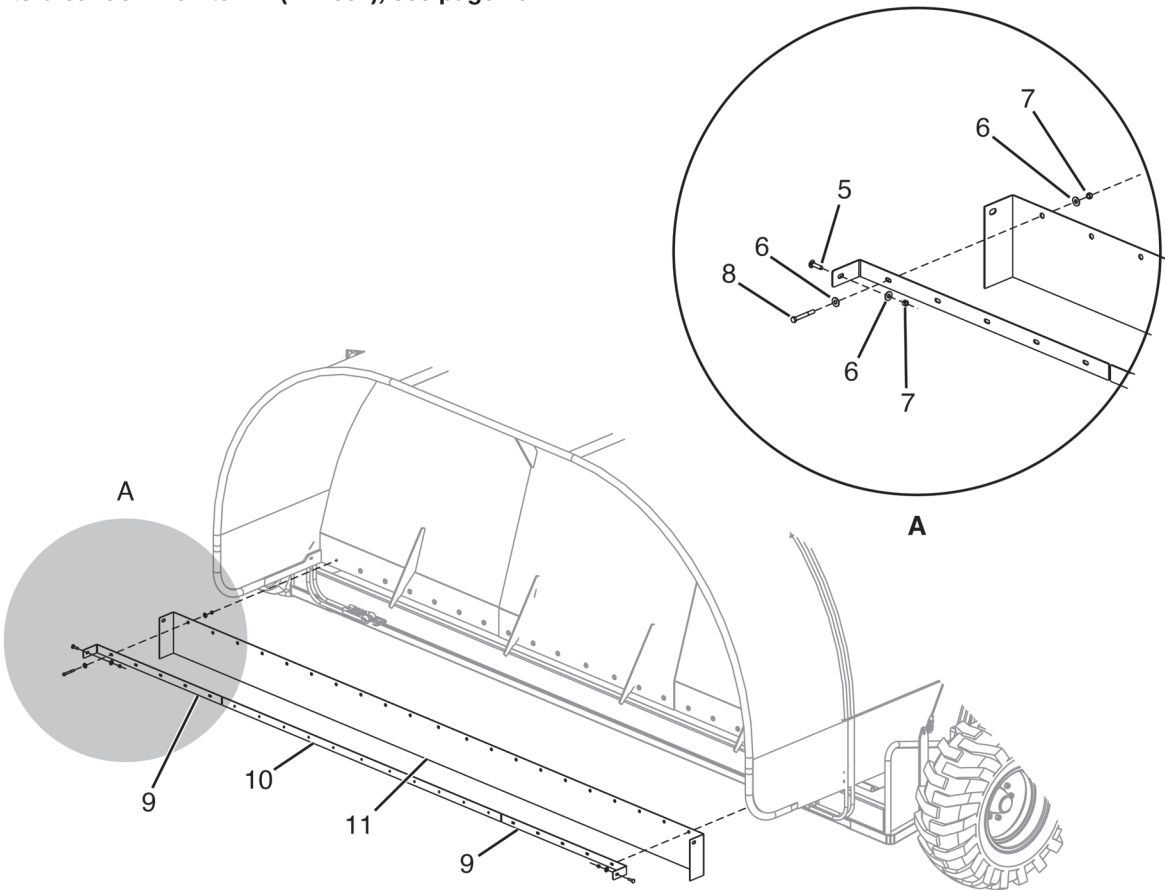
#	QTY.	PART #	DESCRIPTION
1	1	203141	CABLE, GBL HITCH WINCH 25'
2	2	N29079	FERRULE, 1/4" CABLE DOUBLE
3	1	N10177	LINK, 3/8" CHAIN CONNECTOR
4	1	N22914	TURNBUCKLE, HOOK AND EYE 3/8"
5	1	N23763	NUT, JAM 3/8" LEFT HANDED THREAD
6	1	4061	NUT, 3/8" JAM
7	1	N25265	CLAMP, WIRE CABLE 3/16"
8	2	N26743	BOLT, 3/8" X 1 SER FLG
9	4	4068	WASHER, 1/2" SAE FLAT
10	2	N22913	PULLEY, 3/16" CABLE 2 - 1/2" DIA
11	2	4054	NUT, LOCK 1/2"
12	2	4979	NUT, LOCK 3/8" SER FLANGE
13	1	8098	WINCH, CABLE, 1500# 1297 - C131
14	8	4071	WASHER, 3/4" FLAT
15	4	4092	PIN, COTTER 5/32" x 2"
16	4	N23728	PIN, 3/4" x 2 - 3/4" PLATED
17	1	N27684	PAN, GBL12 WITH TARP
18	1	N37358	GROUP, GBL12 BUNGY CORD
19	1	N130841	JACK, 5000 LB LIFT CAP 15" TRAV
20	1	N16288	HARNESS, 25' REAR WISHBONE

Parts Identification

Base Assembly, Bag Pan and Flap (Cont'd) - GBL12 and GBL12C



For parts breakdown of item 1 (N27684), see page 76.



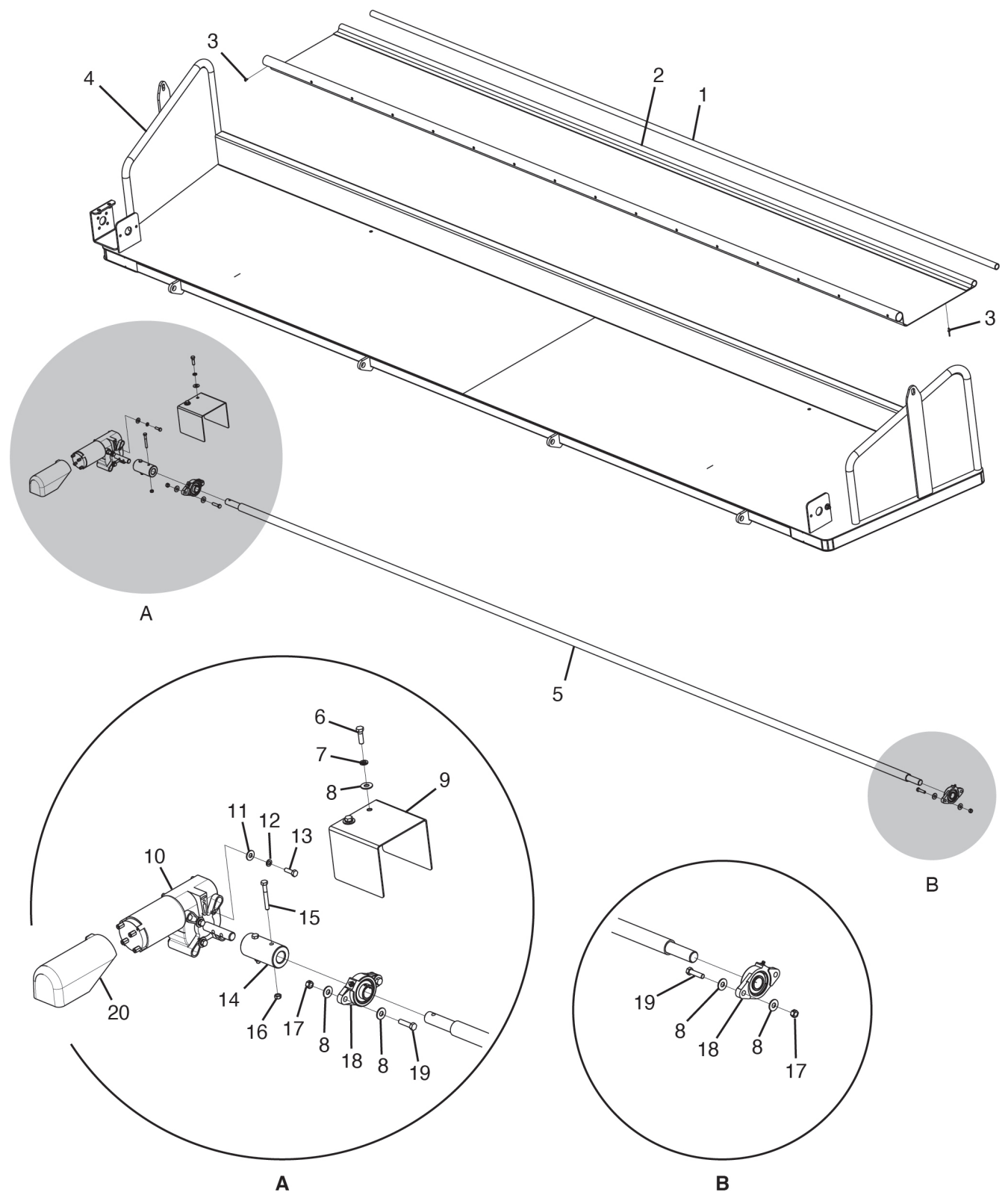
Parts Identification

Base Assembly, Bag Pan and Flap (Cont'd) - GBL12 and GBL12C

#	QTY.	PART #	DESCRIPTION
1	1	N27684	PAN, GBL12 WITH TARP
2	6	4092	PIN COTTER 5/32" X 2"
3	8	4071	WASHER, 3/4" FLAT
4	4	N23728	PIN, 3/4" X 2-3/4" PLATED
5	2	1355	BOLT, CARRIAGE 3/8" X 1-1/2"
6	44	4064	WASHER, FLAT 3/8"
7	23	4052	NUT, LOCK 3/8"
8	21	4007	BOLT, 3/8" X 3" GRADE 5
9	2	N152288	STRIP, GBL12 BOTTOM RUBBER 2
10	1	N29304	STRIP, GBL12 BOTTOM RUBBER
11	1	N152286	FLAP, GBL12 BOTTOM RUBBER 2

Parts Identification

Bag Pan Assembly (N27684) - GBL12 and GBL12C

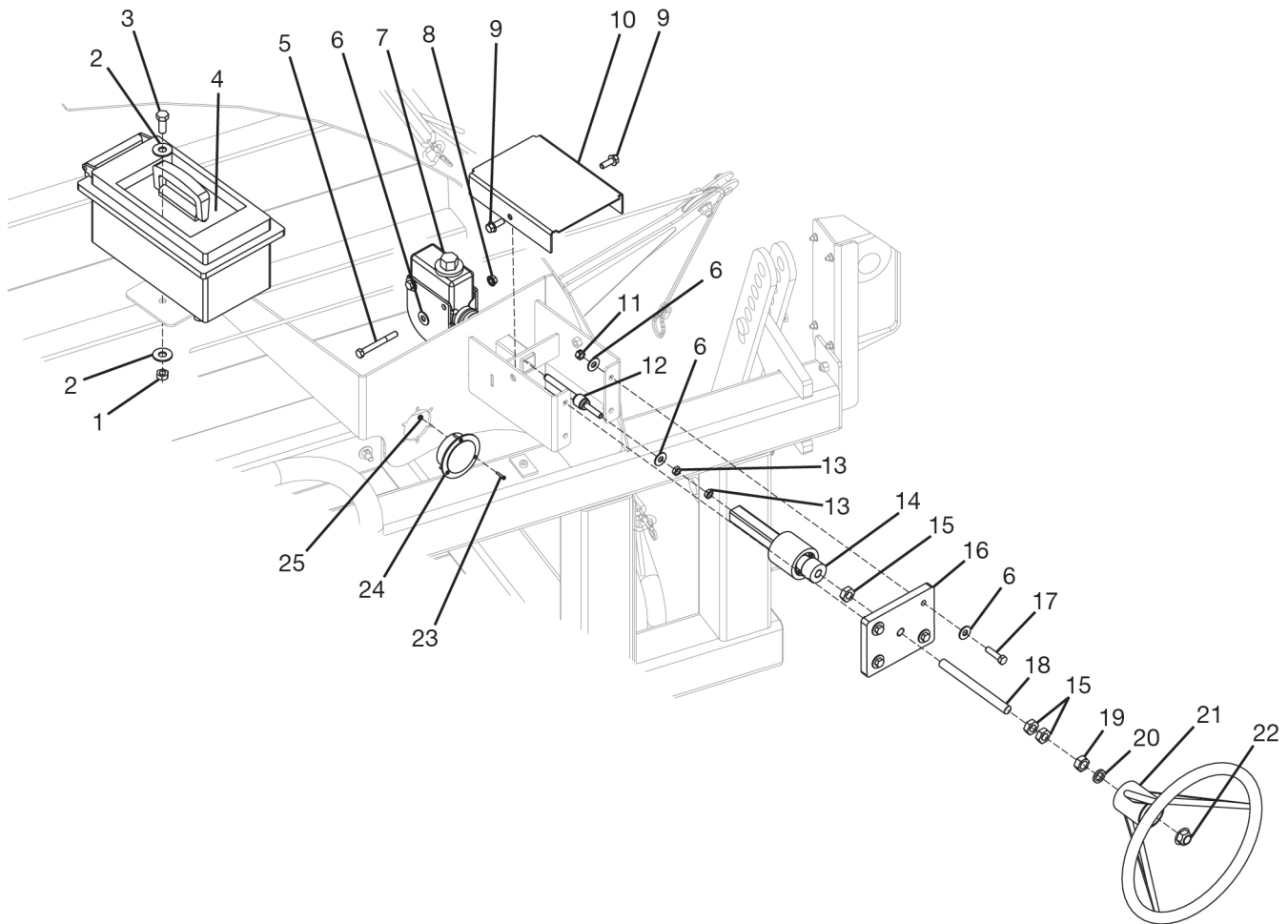


Bag Pan Assembly (N27684) - GBL12 and GBL12C

#	QTY.	PART #	DESCRIPTION
1	1	N29025	PIPE, GBL12 PAN BAG ROLL-IN
2	1	N40024	TARP, GBL12 BAG PAN
3	27	4156	RIVET, 3/16 X 1/2"
4	1	N27268	PAN, GBL12 BOTTOM
5	1	N27656	ROLLER, GBL12 PAN TARP
6	2	4005	BOLT, 3/8" X 1-1/4" GRADE 5
7	2	4065	WASHER, 3/8 LOCK
8	10	4064	WASHER, FLAT 3/8"
9	1	N27688	SHIELD, GBL12 PAN TARP COUPLER
10	1	N27660	MOTOR, ELECTRIC 1/2 HP
11	4	4369	WASHER, 5/16" FLAT
12	4	4228	WASHER, 5/16" LOCK
13	4	4203	BOLT, 5/16" X 1" GRADE 5
14	1	N27683	COUPLER, GBL12 PAN TARP ROLLER
15	2	4204	BOLT, 5/16" X 2-1/2" GRADE 5
16	2	4414	NUT, NYLOCK 5/16"
17	4	4052	NUT, LOCK 3/8"
18	2	N30247	BEARING, 1" DODGE 2BLT FLG
19	4	4006	BOLT, 3/8" X 1-1/2" GRADE 5
20	1	204090	COVER, MOTOR RAIN

Parts Identification

Base Assembly (Cont'd) - GBL12 and GBL12C



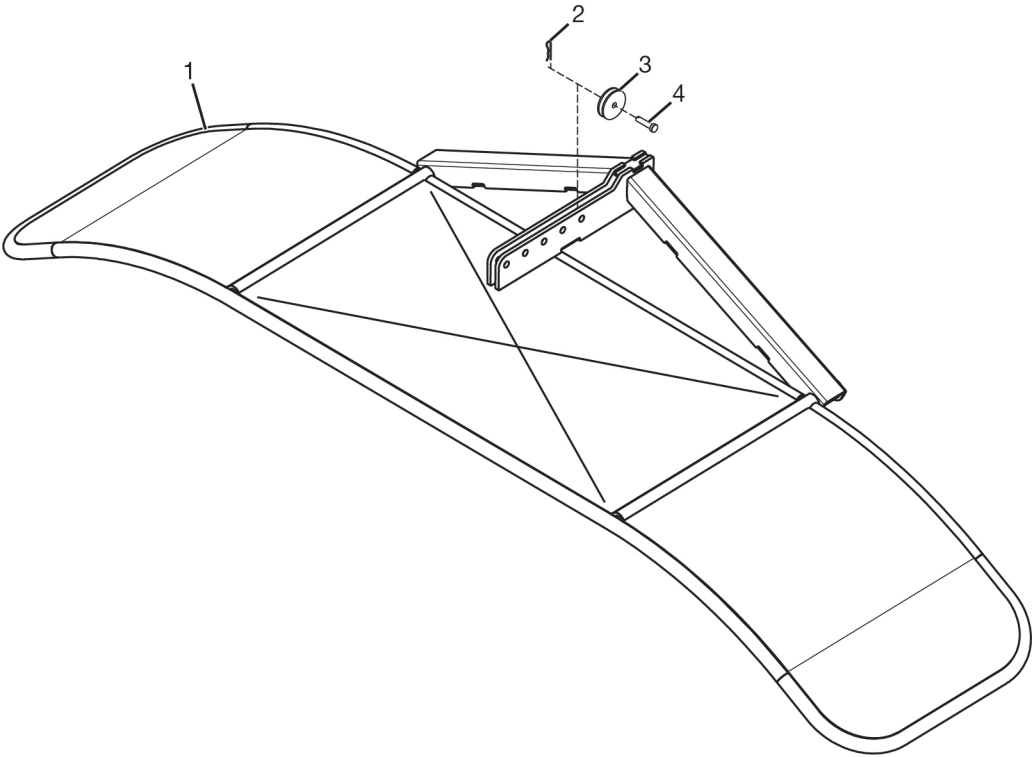
For parts breakdown of item 14 (N27581), see page 124.

Base Assembly (Cont'd) - GBL12 and GBL12C

#	QTY.	PART #	DESCRIPTION
1	2	4054	NUT, LOCK 1/2" TOP
2	4	4486	WASHER, 1/2" FLAT
3	2	4012	BOLT, 1/2" X 1-1/4" GRADE 5
4	1	N25105	TOOLBOX, WINCH STORAGE
5	2	4978	BOLT, 3/8" X 3-1/4" GRADE 5
6	13	4064	WASHER, FLAT 3/8"
7	1	N27294	CYLINDER, BRAKE TITAN MASTER
8	2	4979	NUT, LOCK 3/8" SER FLG
9	2	N26743	BOLT, 3/8" X 1" SER FLG
10	1	N27823	COVER, GBL TITAN BRAKE ACT
11	4	4052	NUT, LOCK 3/8"
12	1	N27309	ROD, TITAN MASTER CYL PUSH
13	2	4061	NUT, 3/8" JAM
14	1	N27581	PUSHER, GBL BEARING BRAKE ACT
15	3	4282	NUT, 5/8" JAM
16	1	N27587	PLATE, GBL BRAKE ACT PSHR END
17	4	4006	BOLT, 3/8" X 1-1/2" GRADE 5
18	1	N27061	ROD, GBL BRAKE ACTR THREADED
19	1	4438	NUT, 5/8" STANDARD GRADE 8
20	1	N16473	WASHER, 5/8 NORDLOCK
21	1	N33112	WHEEL, STEERING DEEP PLASTIC
22	1	4055	NUT, LOCK 5/8" TOP
23	3	4976	SCREW, BHCS #6-32UNC X 3/4"
24	1	N22377	GUAGE, 2000 PSI HYD PRESSURE
25	3	4977	NUT, LOCK #6-32UNC

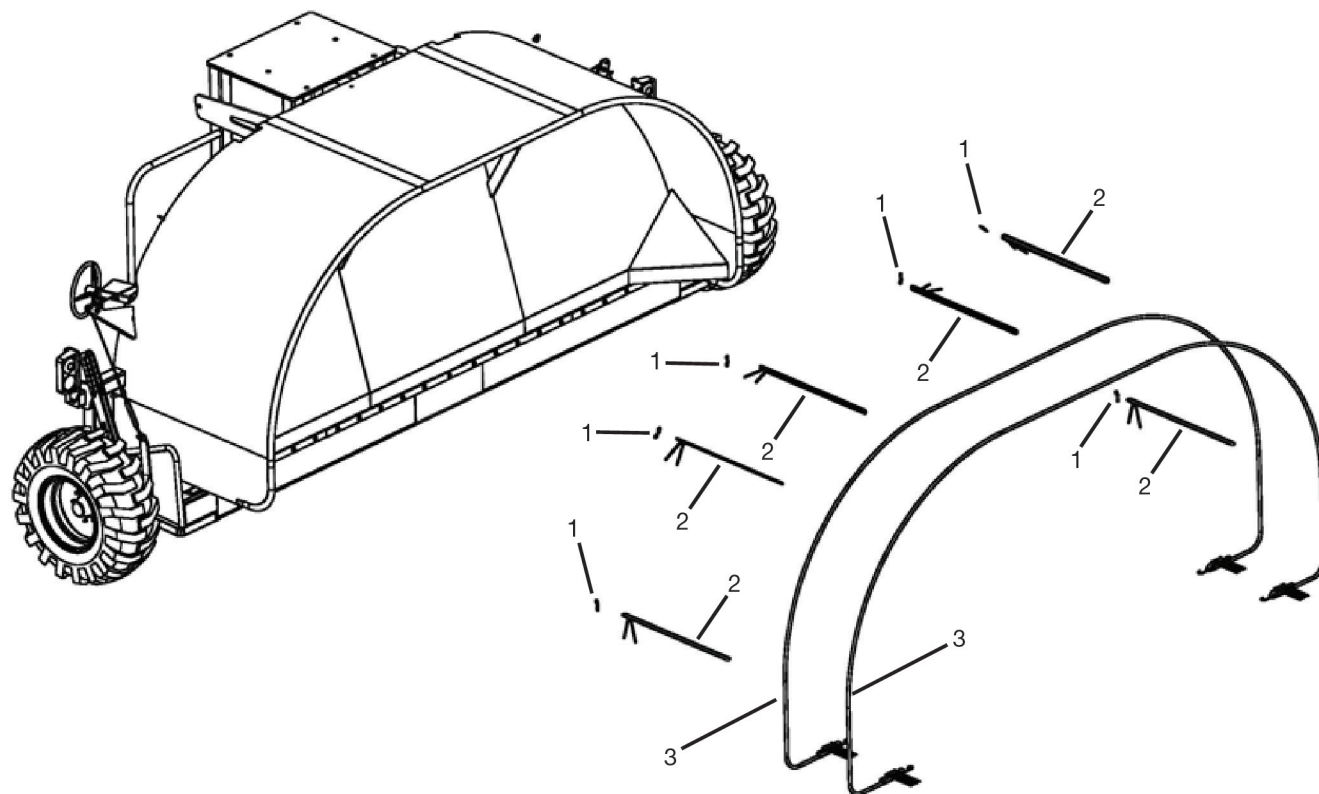
Parts Identification

Bag Lift Cradle (N33583) - GBL12 and GBL12C



#	QTY.	PART #	DESCRIPTION
1	1	N85400	CRADLE, GBL12 ONE PIECE
2	1	4336	CLIP, HAIRPIN 1/8" X 2-1/4"
3	1	N37812	PULLEY, 1/4IN CABLE 3-1/2IN OD
4	1	4358	PIN, 3/4" X 2-1/4"

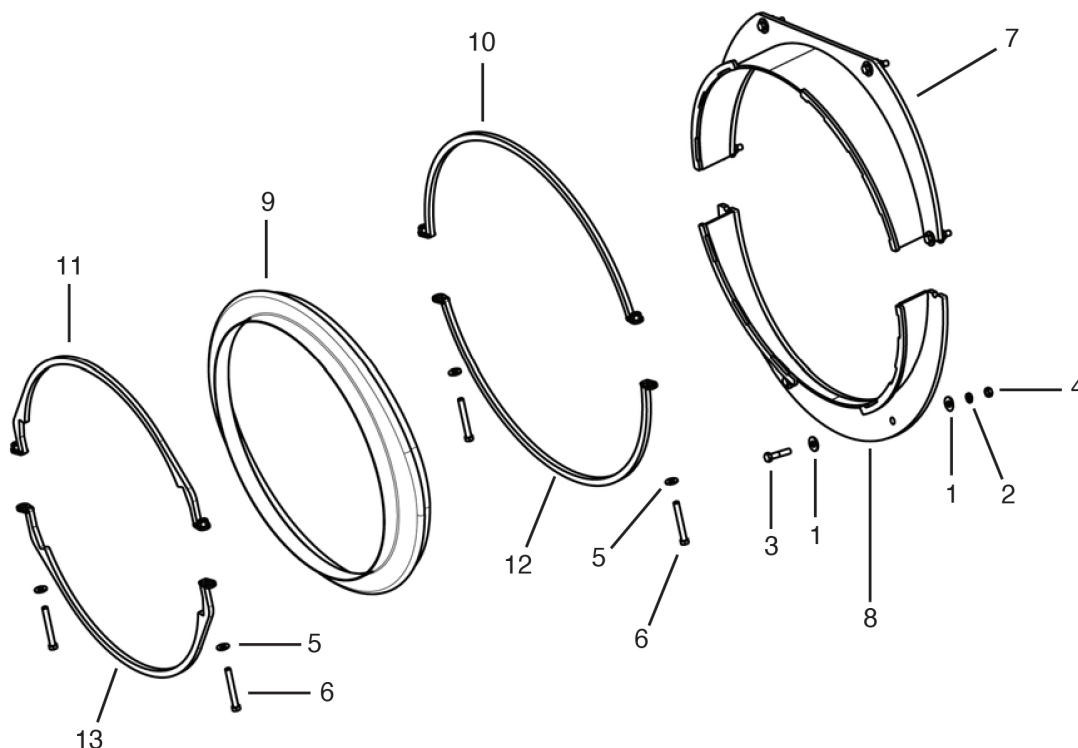
Bungy Assembly (N37358) - GBL12 and GBL12C



#	QTY.	PART #	DESCRIPTION
1	6	N29233	HOOK, 3/8" SNAP
2	6	N27685	ROPE, GBL12 BUNGY CORD
3	2	N27336	CORD, GBL12 BUNGY W/HOOKS

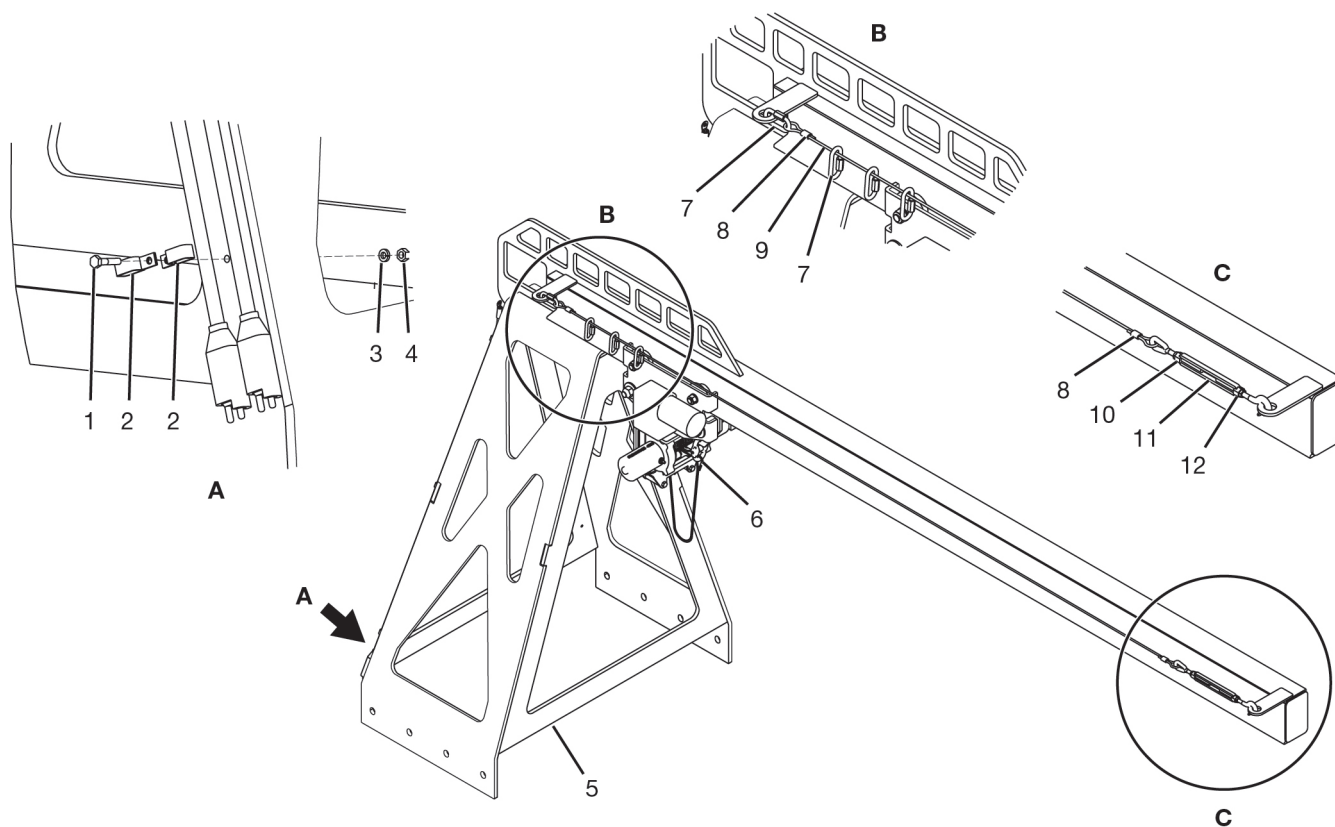
Parts Identification

Auger Body Sleeve (N30629) - GBL12 and GBL12C



#	QTY.	PART #	DESCRIPTION
1	12	4064	WASHER, FLAT 3/8"
2	6	4065	WASHER, 3/8" LOCK
3	6	4232	BOLT, 3/8" x 1 3/4" GRADE 5
4	6	4233	NUT, STANDARD 3/8"
5	4	4369	WASHER, 5/16" FLAT
6	4	4478	BOLT, 3/8" x 3" GR 5 FULL THRD
7	1	N30583	RING, GBL12 AUG BODY SLV TOP
8	1	N30587	RING, GBA HOPPER PANEL AUGER
9	1	N30591	SLEEVE, GBL12 AUGER
10	1	N30620	BAND, GBL12 AUG SLV LRG TOP
11	1	N30700	BAND, GBL12 AUG SLV SML TOP
12	1	N33431	BAND, GBL12 AUG SLV LRG BTM
13	1	N33432	BAND, GBL12 AUG SLV SML BTM

Crane Assembly (N40131) - GBL12 and GBL12C

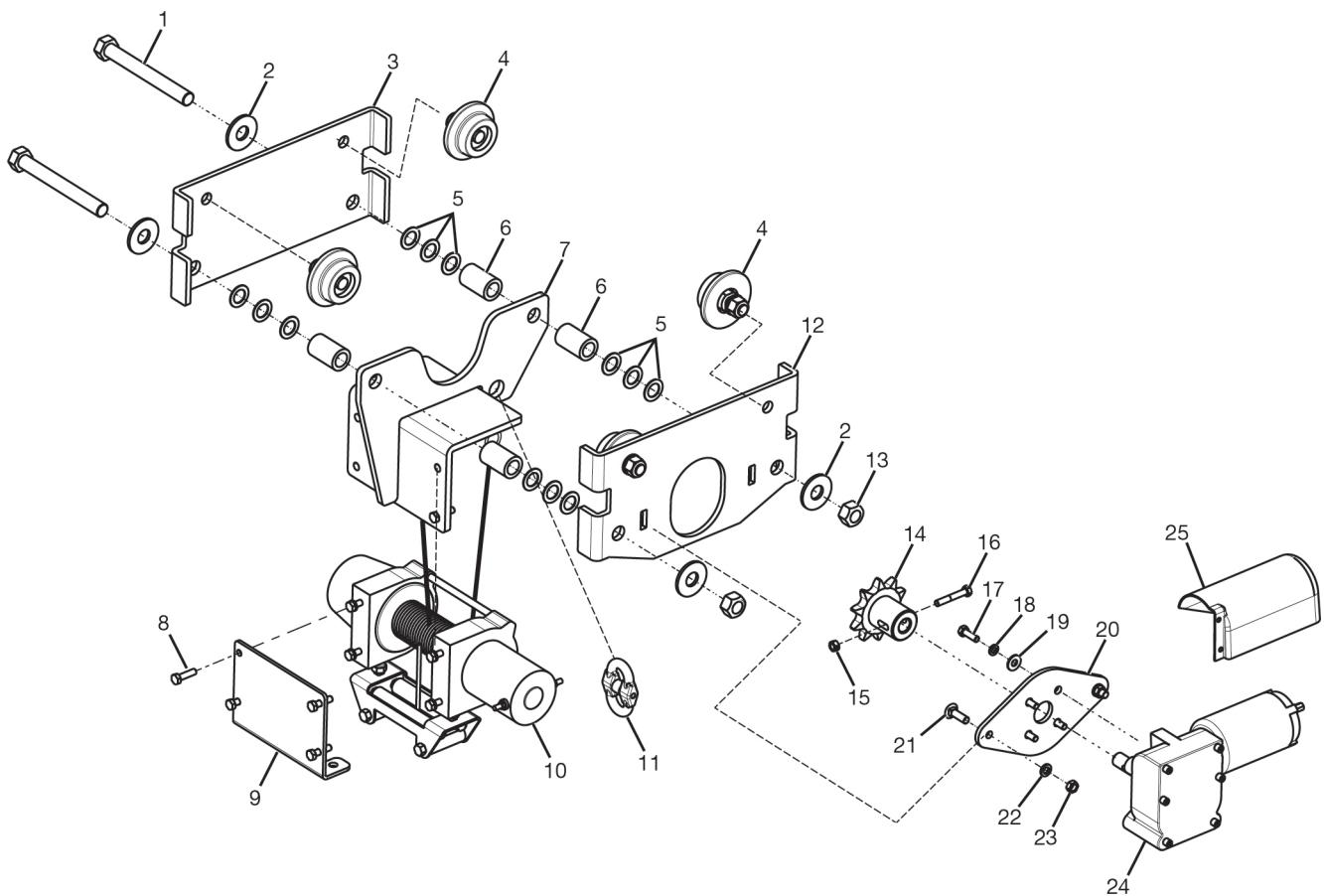


For parts breakdown of item 6 (N27680), see page 84.

#	QTY.	PART #	DESCRIPTION
1	3	4528	BOLT, 1/4" x 1 - 1/4" GRADE 5
2	6	N25234	CLAMP, LOOP 1/2" x 1 - 3/4" VINYL
3	3	4231	WASHER, LOCK 1/4"
4	3	4230	NUT, STANDARD 1/4"
5	1	N40125	CRANE WELDMENT
6	1	N27680	LIFT, GBL12 BEAM WINCH TROLLEY
7	3	N10177	LINK, 3/8IN CHAIN CONNECTOR
8	2	N23881	FERRULE, 3/16" CABLE DOUBLE
9	1	N27940	CABLE, GBL12 BOOM WIRE
10	1	N23763	NUT, JAM 3/8" LEFT HANDED THD
11	1	N22914	TURNBUCKLE, HOOK AND EYE 3/8
12	1	4061	NUT, 3/8" JAM

Parts Identification

Beam Winch Trolley Lift Assembly (N27680) - GBL12 and GBL12C



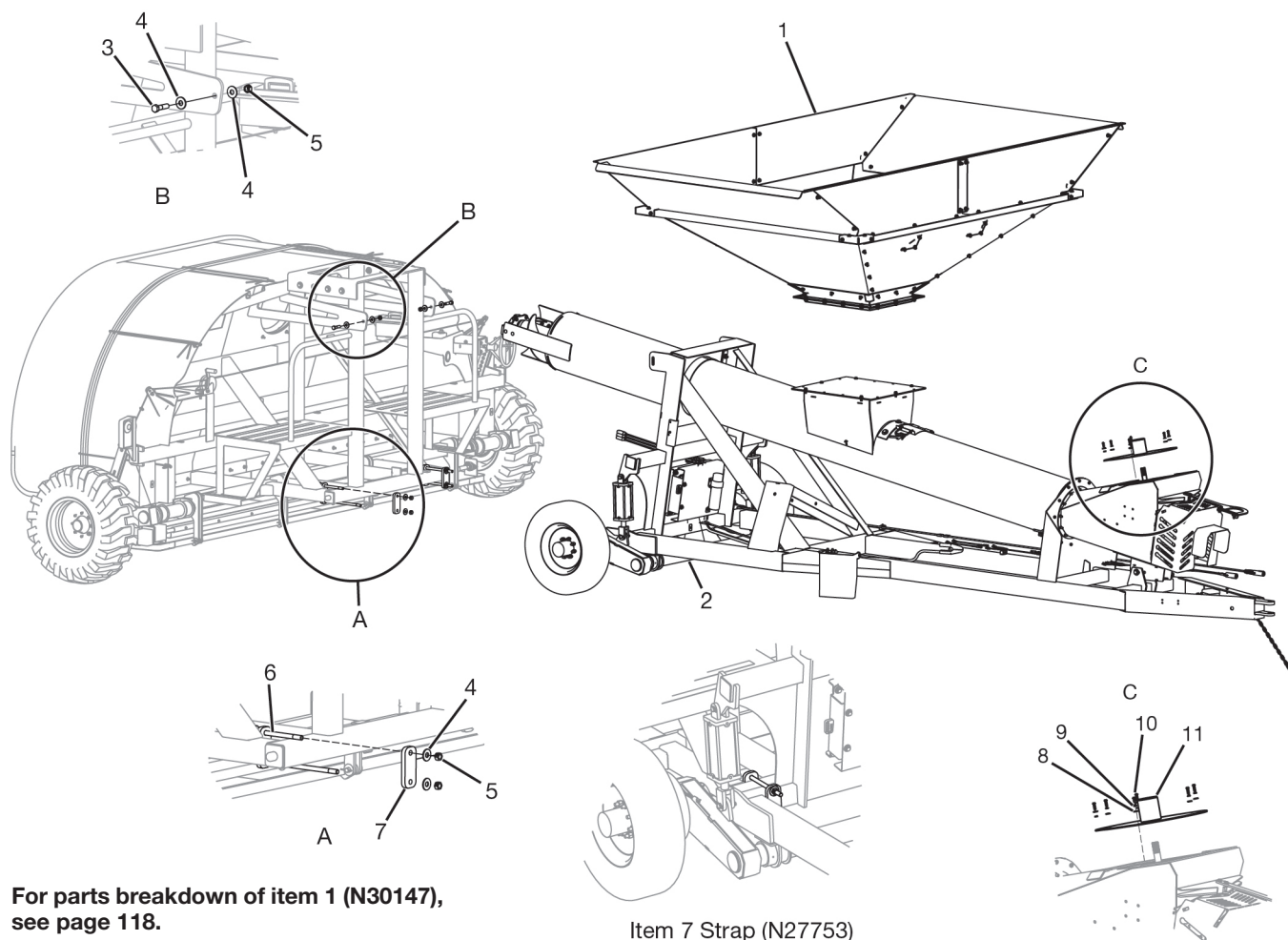
Parts Identification

Beam Winch Trolley Lift Assembly (N27680) - GBL12 and GBL12C

#	QTY.	PART #	DESCRIPTION
1	2	N16351	BOLT, 3/4" X 6-1/2" FN TH GR 8
2	4	4071	WASHER, 3/4" FLAT
3	1	N27682	BRACKET, GBL12 WINCH TROL LEFT
4	4	N27695	ROLLER, TROLLEY 2000#
5	12	4994	WASHER, 3/4ID X 1-1/4OD X .048
6	4	N27766	BUSHING, GBL12 TROLLEY SPACER
7	1	N33236	MOUNT, GBL12 WINCH RT40
8	4	N35220	BOLT, M8 X 30 GR 8.8
9	1	N30172	MOUNT, WARN RT40 FAIRLEAD
10	1	201933	WINCH, WARN VRX 45
11	1	N30678	LINK, 3/8" CM COUPLING
12	1	N27705	BRACKET, GBL12 WINCH TROL RIGHT
13	2	N16352	NUT, LOCK 3/4" GRADE 8 FINE
14	1	N27702	SPROCKET, TROLLEY DRIVE
15	1	4051	NUT, LOCK 5/16"
16	1	N28436	BOLT, 5/16" X 2-1/4" GRADE 5
17	4	4203	BOLT, 5/16" X 1" GRADE 5
18	4	4228	WASHER, 5/16" LOCK
19	4	4369	WASHER, 5/16" FLAT
20	1	N27704	PLATE, GBL12 TROLLEY MTR MNT
21	2	4390	BOLT, 3/8" X 1-1/4" CARRIAGE
22	2	N31741	WASHER, FLAT 3/8" SAE
23	2	4052	NUT, LOCK 3/8"
24	1	N27660	MOTOR, ELECTRIC 1/2 HP
25	1	204090	COVER, MOTOR RAIN

Parts Identification

GBL12 Front Frame Assembly - GBL12 only



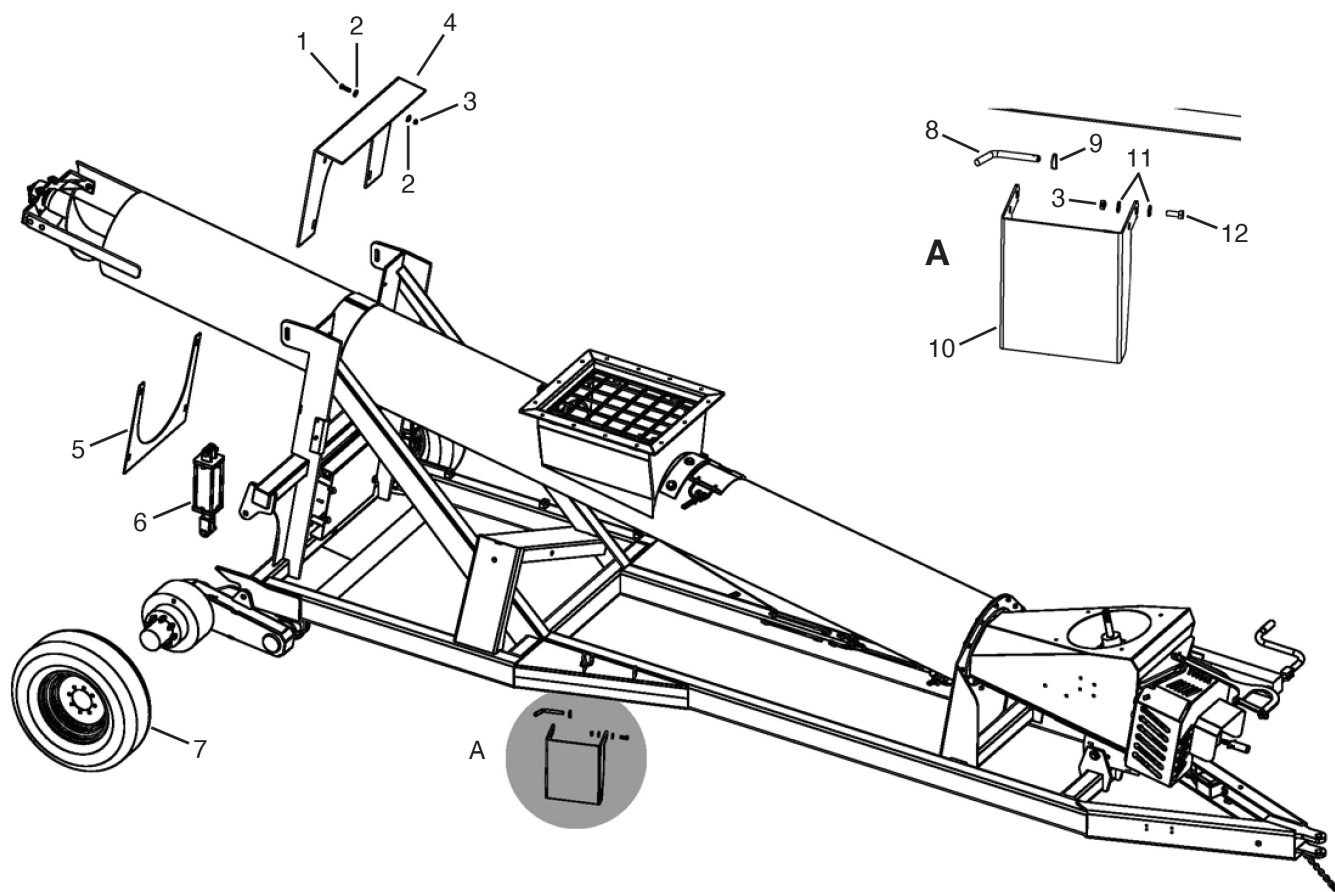
For parts breakdown of item 1 (N30147), see page 118.

For parts breakdown of item 2 (N29023), see pages 87 through 96.

Item 7 Strap (N27753) from Detail A shown secured into position with hardware.

#	QTY.	PART #	DESCRIPTION
1	1	N30147	HOPPER, GBL12 COMPLETE WITH EXT
2	Reference Only	N29023	HITCH, GBL12 FRONT FRAME
3	2	4224	BOLT, 3/4" X 2-1/2" GR 5
4	12	4071	WASHER, 3/4" FLAT
5	6	4056	NUT, LOCK 3/4
6	4	N27754	BOLT, 3/4" x 12" GRADE 5
7	4	N27753	STRAP, GBL12 CONNECTOR
8	6	4064	WASHER, FLAT 3/8"
9	6	4065	WASHER, 3/8" LOCK
10	6	4005	BOLT, 3/8" x 1-1/4" GRADE 5
11	1	N30529	COVER, GBL12 BOOT 6 BOLT

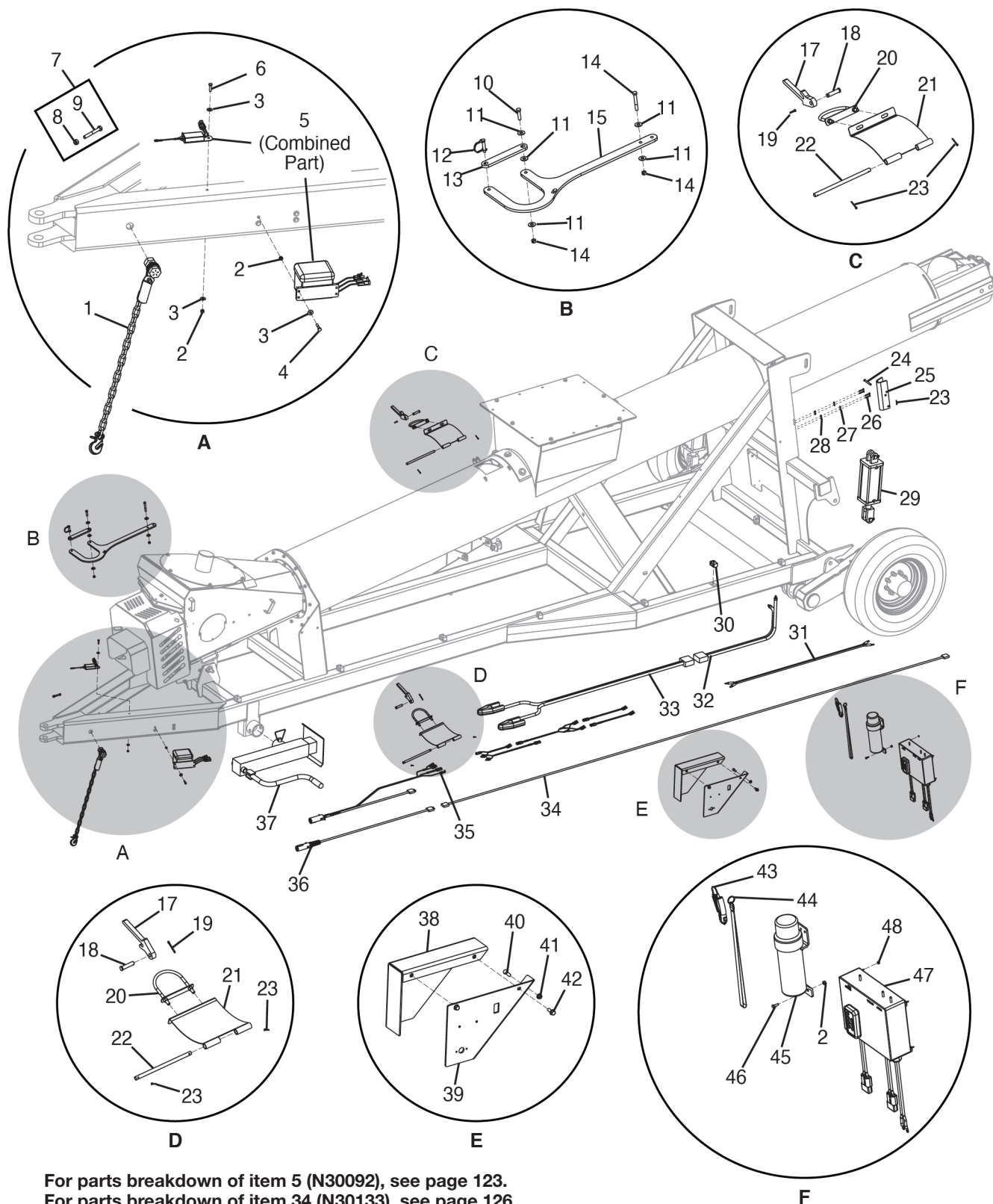
GBL12 Front Frame Hitch Assembly - GBL12 only



#	QTY.	PART #	DESCRIPTION
1	4	4014	BOLT, 1/2" X 1-3/4" GRADE 5
2	8	4486	WASHER, 1/2" FLAT
3	6	4054	NUT, LOCK 1/2"
4	1	N27666	BRACKET, GBL12 AUG LOCK DOWN
5	1	N29022	PLATE, GBL12 AUGER BOTTOM SUP
6	2	N25166	CYLINDER, HYD 4" x 8" - 3000 PSI
7	2	N29349	WHEEL, 235/75R 17.5 TIRE & RIM
8	1	N22343	PIN, 5/8" x 4" PLATED 45 DEG HANDLE
9	1	N22192	PIN, LINCH 3/16" x 1 - 9/16"
10	1	N27779	STOP, GBL12 SWING AUGER
11	4	4068	WASHER, 1/2" SAE FLAT
12	1	4012	BOLT, 1/2" x 1 - 1/4" GRADE 5

Parts Identification

GBL12 Front Frame Hitch Assembly (Cont'd) - GBL12 only



For parts breakdown of item 5 (N30092), see page 123.
For parts breakdown of item 34 (N30133), see page 126.

Parts Identification

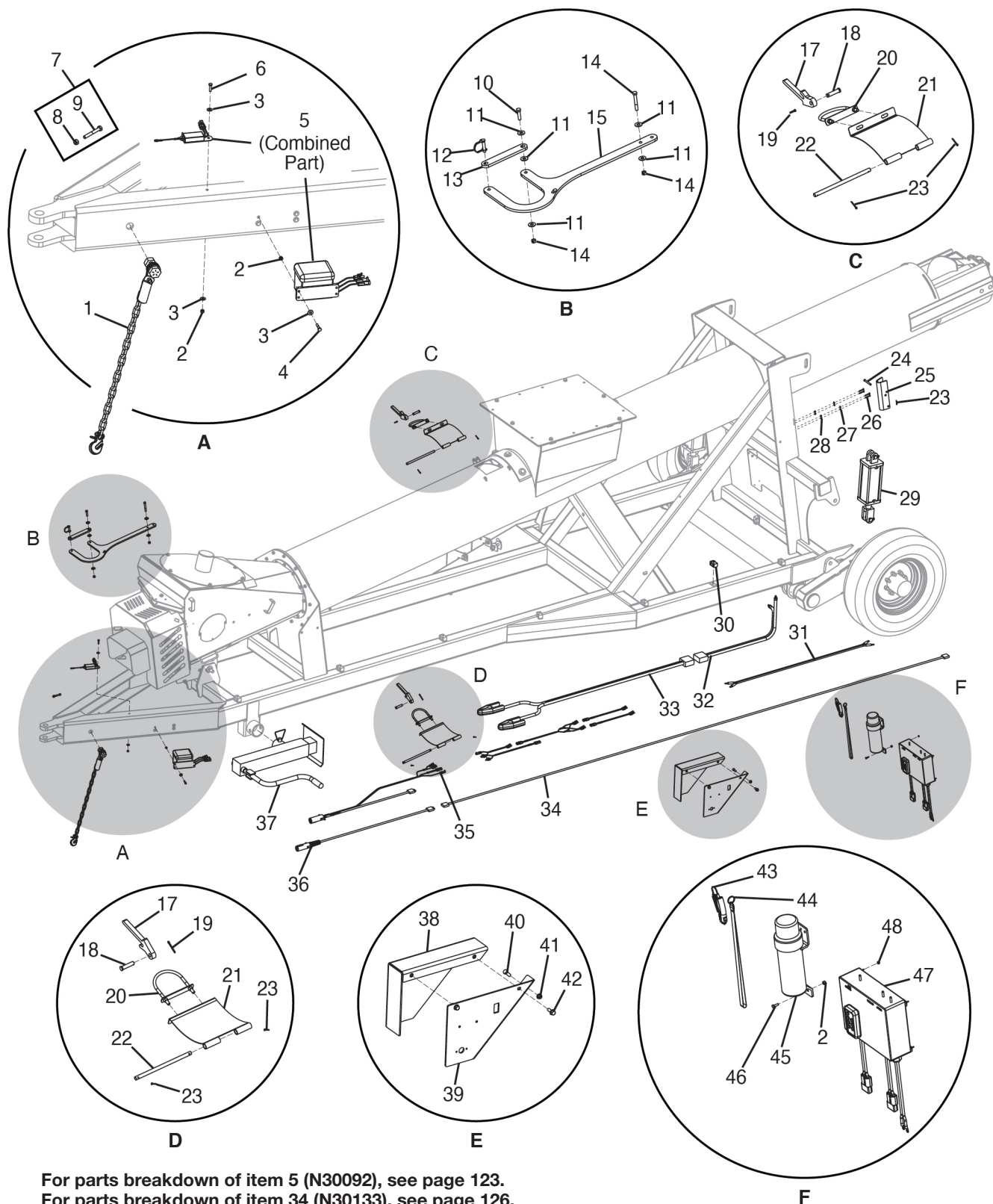
GBL12 Front Frame Hitch Assembly (Cont'd) - GBL12 only

#	QTY.	PART #	DESCRIPTION
1	1	N50260	CHAIN, SAFETY 21,000 LB W/HDWR
2	5	4996	NUT, LOCK 1/4" NYLOCK
3	6	3183	WASHER, FLAT 1/4"
4	4	4528	BOLT, 1/4" X 1-1/4" GR 5
5	1	N30092	WIRE, BRAKE BATTERY
6	1	4000	BOLT, 1/4" X 1" GR 5
7	1	202848	KIT, GBL12A PTO SHEAR BOLT
8	1	N23490	NUT, LOCK M8 NYLOCK
9	1	N23489	BOLT, M8 X 60 GR 8.8
10	1	4006	BOLT, 3/8" X 1-1/2" GRADE 5
11	7	4064	WASHER, FLAT 3/8"
12	1	N27991	PIN, 3/8" X 1-3/8" RETAINER
13	1	N27990	BAR, GBL SWING AUG PTO HOLDER
14	3	4052	NUT, LOCK 3/8"
15	1	N27989	HOLDER, GBL TRK AUG PTO LONG
16	2	4538	BOLT, 3/8" X 2-3/4" GRADE 5
17	2	N23773	LATCH, GBL TRAP DOOR
18	2	4432	PIN, 1/2" X 1-3/4" (2" OVERALL)
19	2	4325	PIN, COTTER 3/16" X 1-1/2"
20	2	N23775	U-BOLT, 3/8" X 3-1/2" X 5"
21	2	N27979	DOOR, GBL12 AUGER CLEAN OUT
22	2	N23789	PIN, GBL AUGER BOTTOM DOOR SHIELD
23	6	4098	PIN, COTTER 1/8" X 1-1/2"
24	2	4093	PIN, 3/8" X 3" (2.75" USEABLE)
25	2	N19768	STOP, CYLINDER 9.5" SAFETY
26	4	N22382	SCREW, BHCS #10-32UNF X 1-1/2IN
27	4	4555	WASHER, FLAT #10
28	4	N16334	NUT, LOCK #10-32UNC NYLOCK
29	2	N25166	CYLINDER, HYD 4" X 8" - 3000 PSI
30	8	N21365	CLAMP, 3/8" DOUBLE HOSE
31	1	N157800	HARNESS, GBL12A SWG AUG WINCH
32	1	N26639	HARNESS, GBL12 MAIN POWER
33	1	N26638	HARNESS, GBL12 TRACTOR BATTERY
34	1	N30647	HARNESS, 4-FLAT X 15 FT EXT

Parts list continued on following page.

Parts Identification

GBL12 Front Frame Hitch Assembly (Cont'd) - GBL12 only



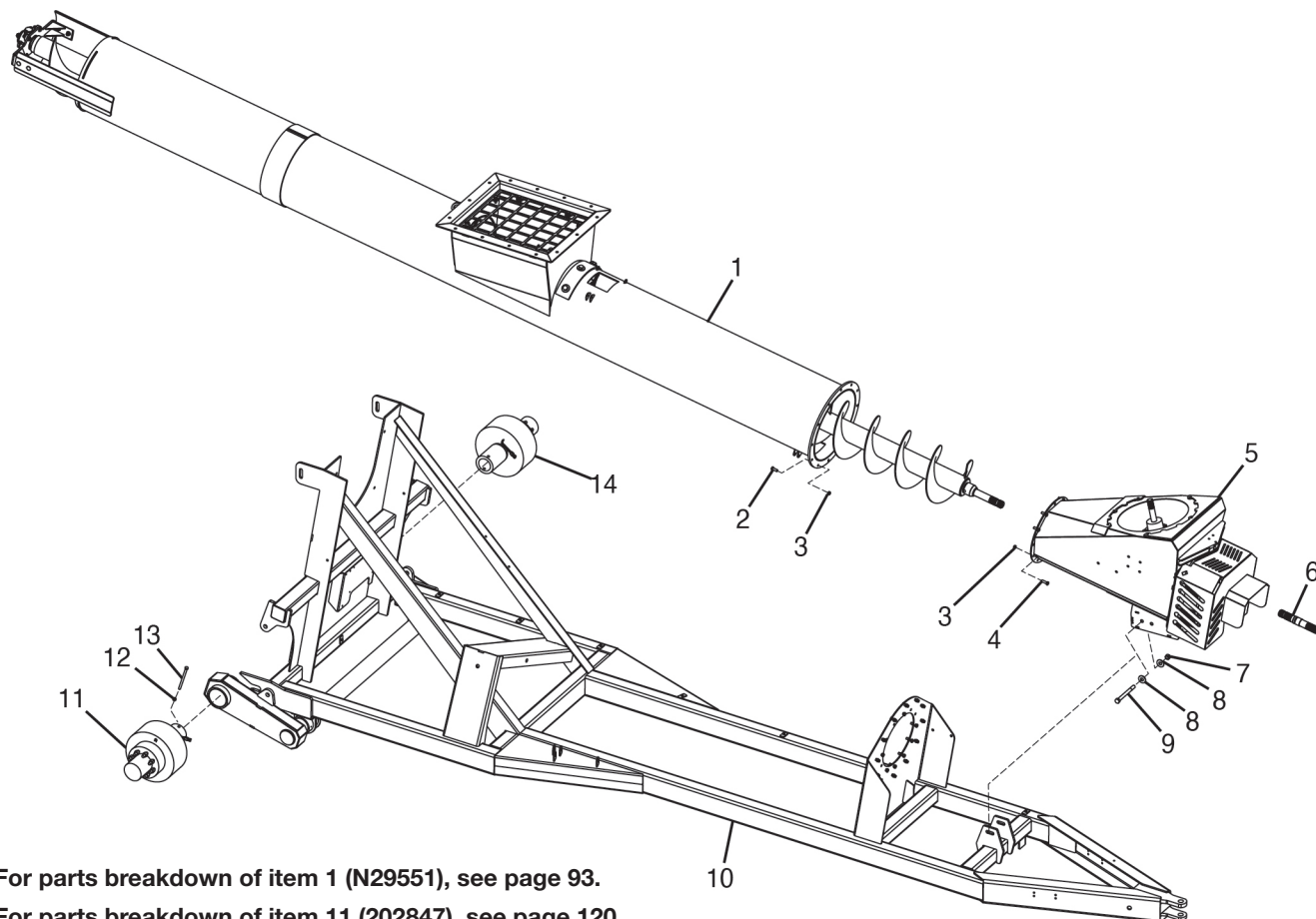
For parts breakdown of item 5 (N30092), see page 123.
For parts breakdown of item 34 (N30133), see page 126.

GBL12 Front Frame Hitch Assembly (Cont'd) - GBL12 only

#	QTY.	PART #	DESCRIPTION
35	1	N30133	GROUP, GBL12 WIRING
36	1	N22784	HARNESS, GBU 4' BRAIDED TOUNGE
37	1	N13732	JACK, PULL-TYPE HITCH
38	1	N157132	COVER, GBL12 WINCH PANEL
39	1	202545	PLATE, GBL12 WINCH ELC MNT 2
40	2	4195	BOLT, 3/8" X 1" GRADE 5
41	2	4979	NUT, LOCK 3/8" SER FLG
42	2	N26743	BOLT, 3/8" X 1" SER FLG
43	1	N39055	CHARGER, CAR MICRO USB
44	1	N33024	LANYARD, LOFTNESS KEYCHAIN
45	1	N19600	HOLDER, 01-315A STND. MANUAL
46	3	4340	BOLT, 1/4" X 3/4" GRADE 5
47	1	N39094	RECEIVER, 3 CONTACT LOFTNESS
48	4	N16133	NUT, NYLON INSERT #8

Parts Identification

Front Frame Assembly - GBL12 only



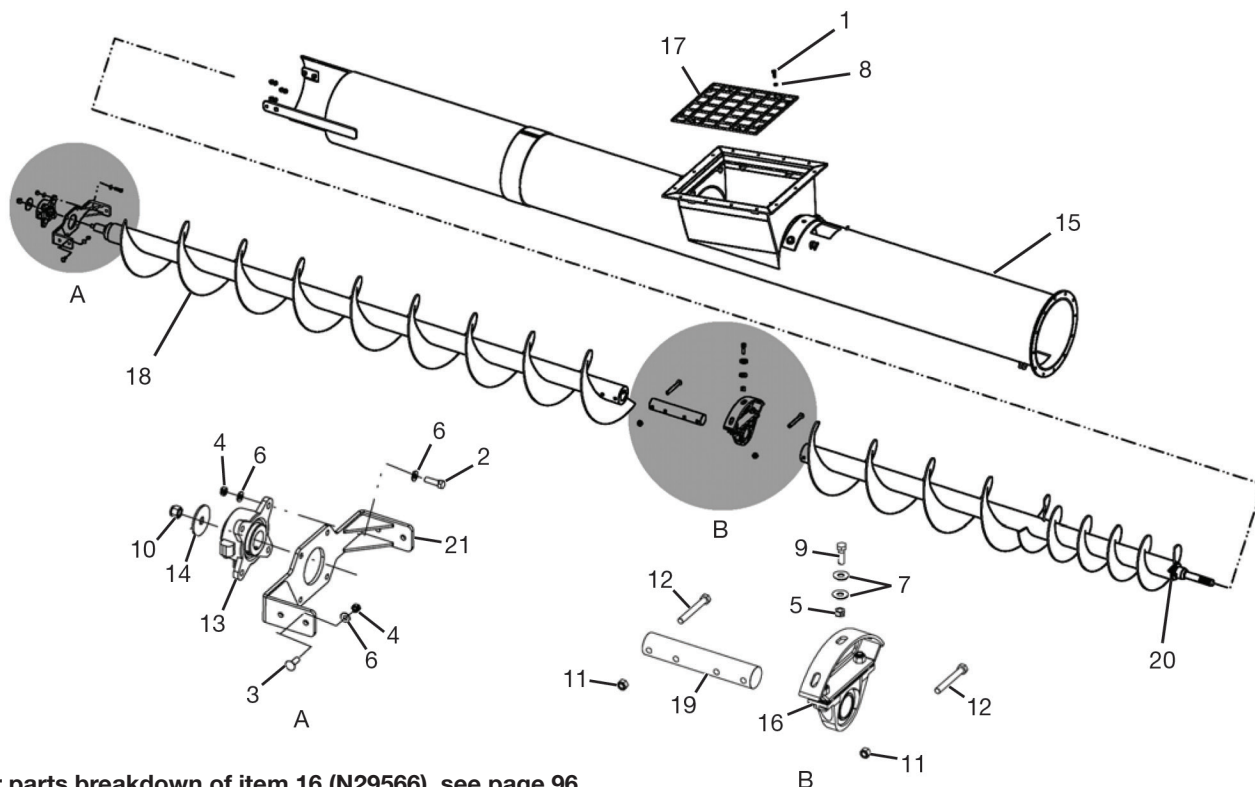
For parts breakdown of item 1 (N29551), see page 93.

For parts breakdown of item 11 (202847), see page 120.

For parts breakdown of item 14 (202846), see page 120.

#	QTY.	PART #	DESCRIPTION
1	1	N29551	AUGER, GBL12 COMP SPLIT
2	12	4012	BOLT, 1/2" X 1-1/4" GRADE 5
3	24	4054	NUT, LOCK 1/2" TOP
4	8	4013	BOLT, 1/2" X 1-1/2" GRADE 5
5	1	N27975	BOOT, BRANDT FRONT
6	1	N26693	SHAFT, BRANDT GEARBOX
7	1	4056	NUT, LOCK 3/4"
8	2	4071	WASHER, 3/4" FLAT
9	1	4960	BOLT, 3/4" X 8" GRADE 5
10	1	N27447	FRAME, GBL12 HITCH
11	1	202847	AXLE, GBU12 RIGHT WIRED
12	2	4436	NUT, 1/2" LOCK FN TD GRADE 8
13	2	4330	BOLT, 1/2" X 7" GR 8
14	1	202846	AXLE, GBU12 LEFT WIRED

Split Auger (N29551) - GBL12 only

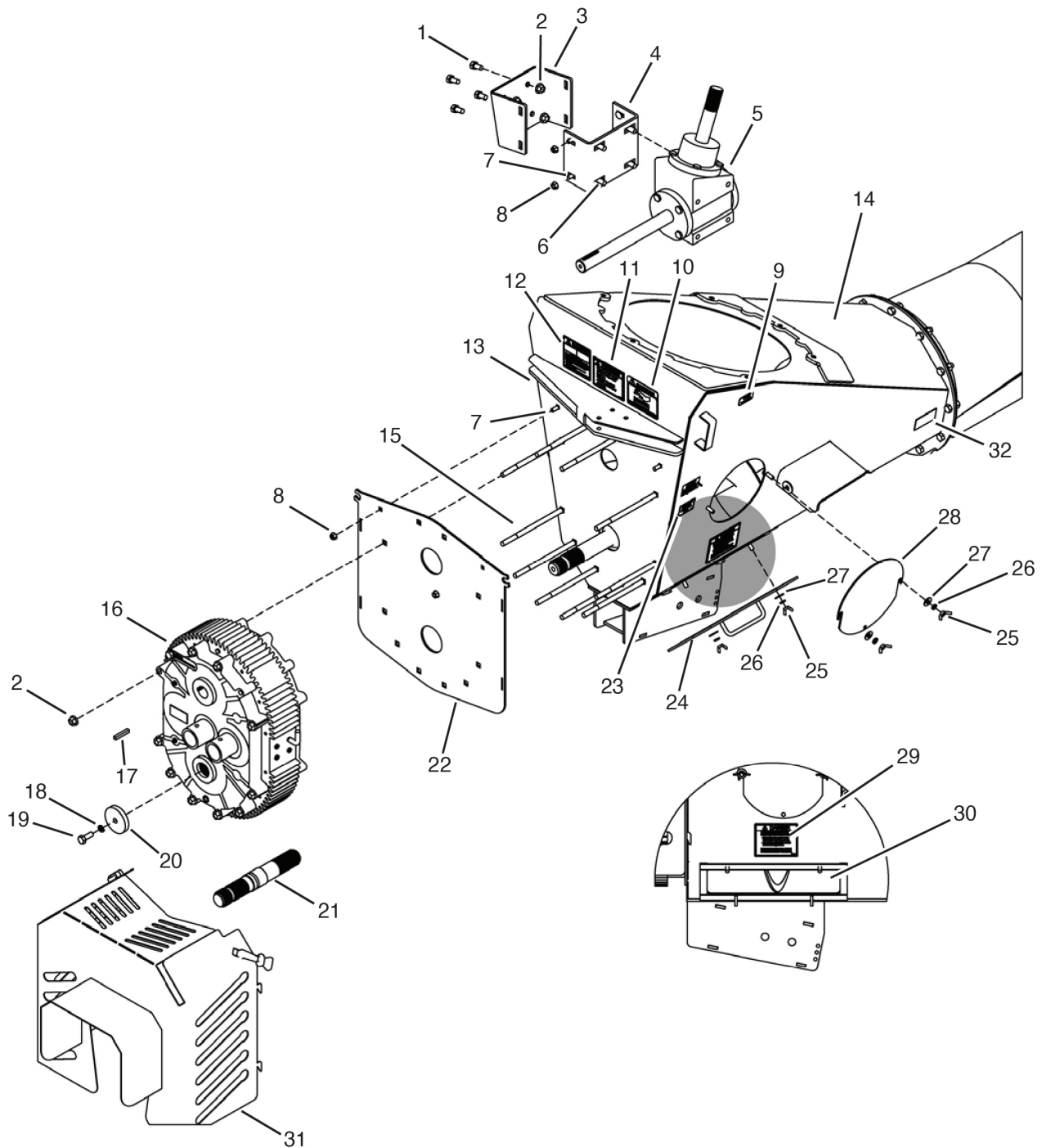


For parts breakdown of item 16 (N29566), see page 96.

#	QTY.	PART #	DESCRIPTION
1	8	4013	BOLT, 1/2" X 1 - 1/2" GRADE 5
2	4	4014	BOLT, 1/2" X 1 - 3/4" GRADE 5
3	4	4039	BOLT, CARRIAGE 1/2" X 1 - 1/2"
4	8	4054	NUT, LOCK 1/2"
5	3	4056	NUT, LOCK 3/4"
6	12	4068	WASHER, 1/2" SAE FLAT
7	6	4071	WASHER, 3/4" FLAT
8	8	4155	WASHER, LOCK 1/2"
9	3	4475	BOLT, 3/4" X 2 - 1/4" GRADE 5
10	1	4985	NUT, LOCK 3/4 - 16UNF NYLOCK
11	4	N16352	NUT, LOCK 3/4" GR 8 FINE THRD
12	4	N16752	BOLT, 3/4" X 6" THREAD GRADE 8
13	1	N30236	BEARING, 2" DODGE DBL TPD 4-BF
14	1	N29248	WASHER, GBL12 AUGER RETAINING
15	1	N29552	WELDMENT, GBL12 COMP SPLIT AUG
16	1	N29566	MOUNT, GBL12 AUGER HANGER
17	1	N29586	SCREEN GBL12 HOPPER BOLT - IN
18	1	N29594	AUGER, GBL12 TOP 18" W/SHAFTS
19	1	N29600	SHAFT, GBL12 AUGER MIDDLE
20	1	N29601	AUGER, GBL12 SPLIT MAIN BTM
21	1	N29842	MOUNT, GBL12 AUGER END BRG

Parts Identification

Front Boot Assembly - GBL12 only



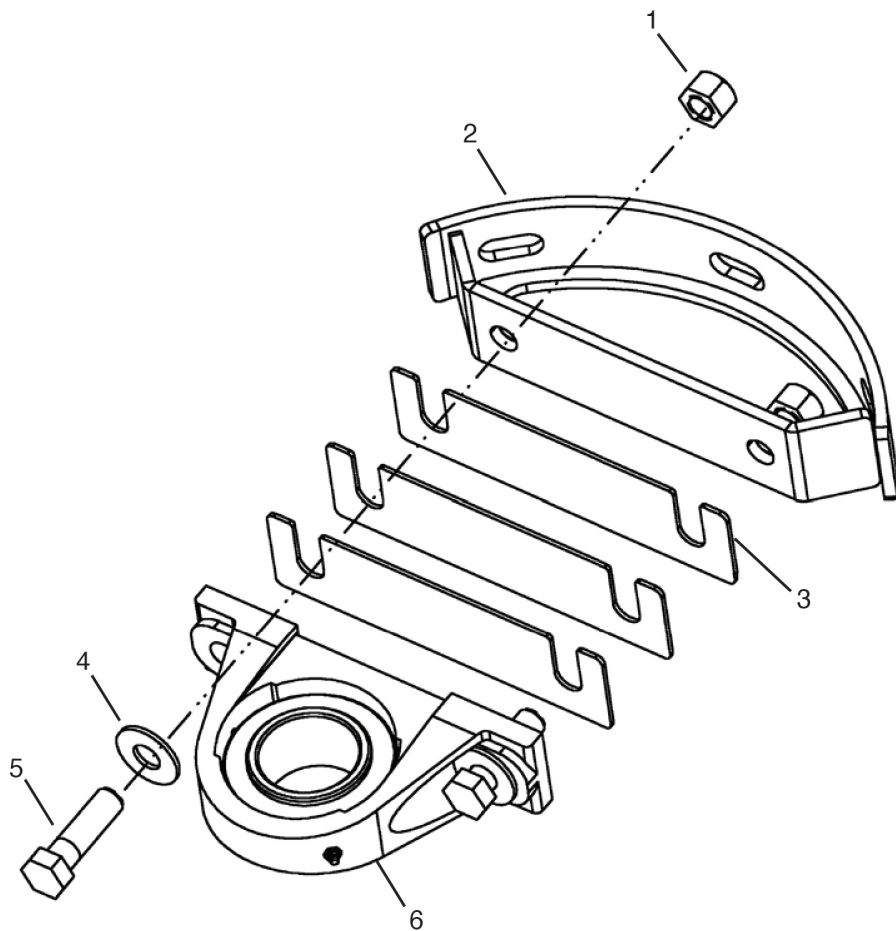
Parts Identification

Front Boot Assembly - GBL12 only

#	QTY.	PART #	DESCRIPTION
1	4	4011	BOLT, 1/2" x 1" GR 5
2	14	N29075	NUT, 1/2" SERRATED FLANGE
3	1	N26673	MOUNT, HP OUTER GEARBOX
4	1	N26676	MOUNT, INNER GBOX
5	1	N26687	GEARBOX, HD - LOWER 13" HP MDSA
6	4	N26748	BOLT, 1/2" x 1" SERRATED FLANGE
7	6	4034	BOLT, CARRIAGE 3/8" x 1"
8	6	4979	NUT, 3/8" SERRATED FLANGE
9	1	N26679	DECAL, AUGER PATENT
10	1	N26683	DECAL, CAUTION HOT SURFACE
11	1	N26680	DECAL, SWING AUGER #20
12	1	N26682	DECAL, MOVING PART HAZARD
13	2	N26684	LATCH, RUBBER
14	1	N31080	BD BOOT, WELD
15	10	N26750	BOLT, 1/2" x 9" CARRIAGE
16	1	N26688	GEARBOX, 1.84:1 HELICAL
17	1	7189-05	KEY, 5/16" x 2"
18	1	4155	WASHER, LOCK 1/2"
19	1	4012	BOLT, 1/2" x 1 - 1/4" GR 5
20	1	N26670	WASHER, LOWER FLIGHT RETAINING
21	1	N26693	SHAFT, DRIVE GEARBOX B003008
22	1	N26677	PLATE, BOOT FACE
23	1	N26760	PLATE, LOFTNESS SERIAL NO.
24	1	N26675	DOOR, CLEAN OUT
25	4	N19307	NUT, WING 3/8"
26	4	4065	WASHER, LOCK 3/8"
27	4	4064	WASHER, FLAT 3/8"
28	1	N26678	COVER, BOOT ACCESS
29	1	N26681	DECAL, CLEAN OUT COVERS #15
30	1	N26685	FOAM, SELF - ADHS 1/8" x 3/4"
31	1	N26671	GUARD, FRONT GEARBOX
32	2	N26686	TAPE, REFLECT AMBER 1 - 1/2" x 3"

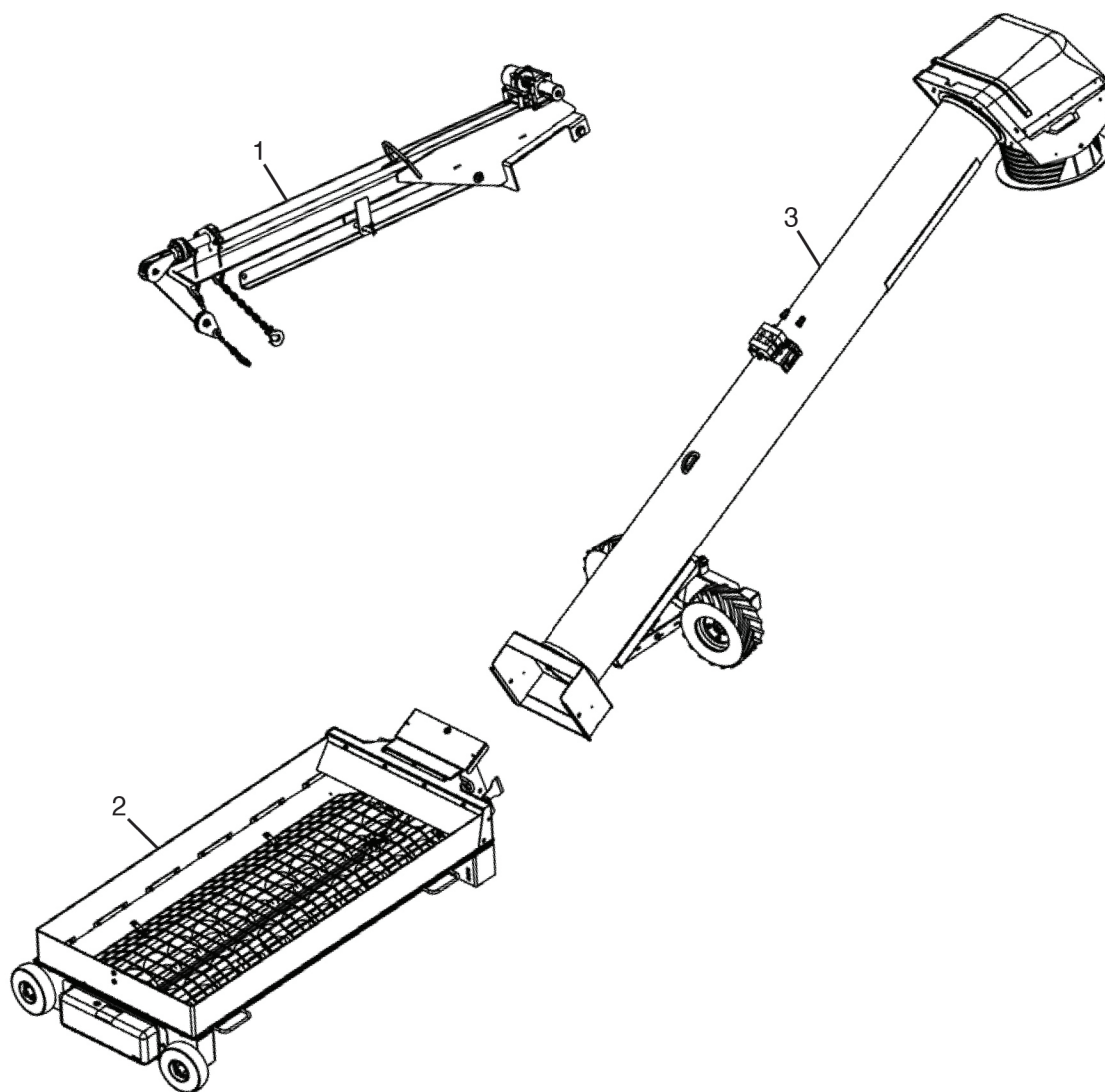
Parts Identification

Auger Hanger Mount (N29566) - GBL12 only



#	QTY.	PART #	DESCRIPTION
1	2	4170	NUT, LOCK 7/8 TOP
2	1	N29567	BRACKET GBL12 AUGER HANGER
3	3	N29579	SHIM, GBL12 AUG BRKT
4	2	N29580	WASHER, FLAT 7/8"
5	2	N29581	BOLT, 7/8" X 3" GR 5
6	1	N30241	BEARING, 2-15/16" DOGE PLWBK

Swing Auger Components (N29114) - GBL12 only



For parts breakdown of item 1 (N33220), see page 108.

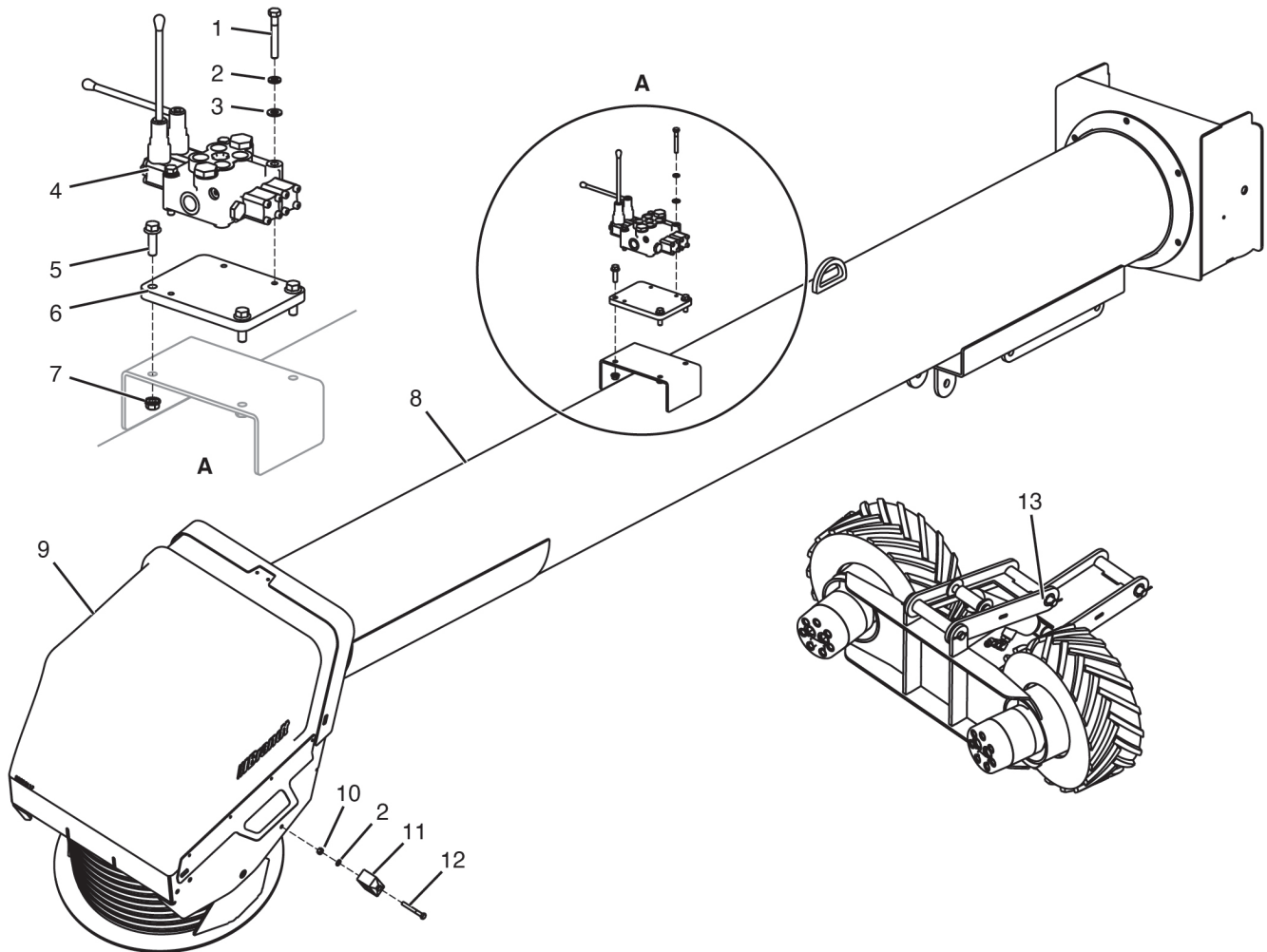
For parts breakdown of item 2 (N29066), see pages 104 through 107.

For parts breakdown of item 3 (N29230), see page 98.

#	QTY.	PART #	DESCRIPTION
1	1	N33220	LIFT, GBL12 SWING AUGER HOPPER
2	1	N29066	HOPPER, TRUCK AUG ASSEMBLED
3	1	N29230	AUGER, GBL12 SWING W/O PAN

Parts Identification

Swing Auger Components without Pan (N29230) - GBL12 only



See page 100 for the swing auger component hydraulic diagram and hose routing.

For parts breakdown of items 8 (N27942) and 9 (N29041), see page 102.
For parts breakdown of item 13 (N27851), see page 101.

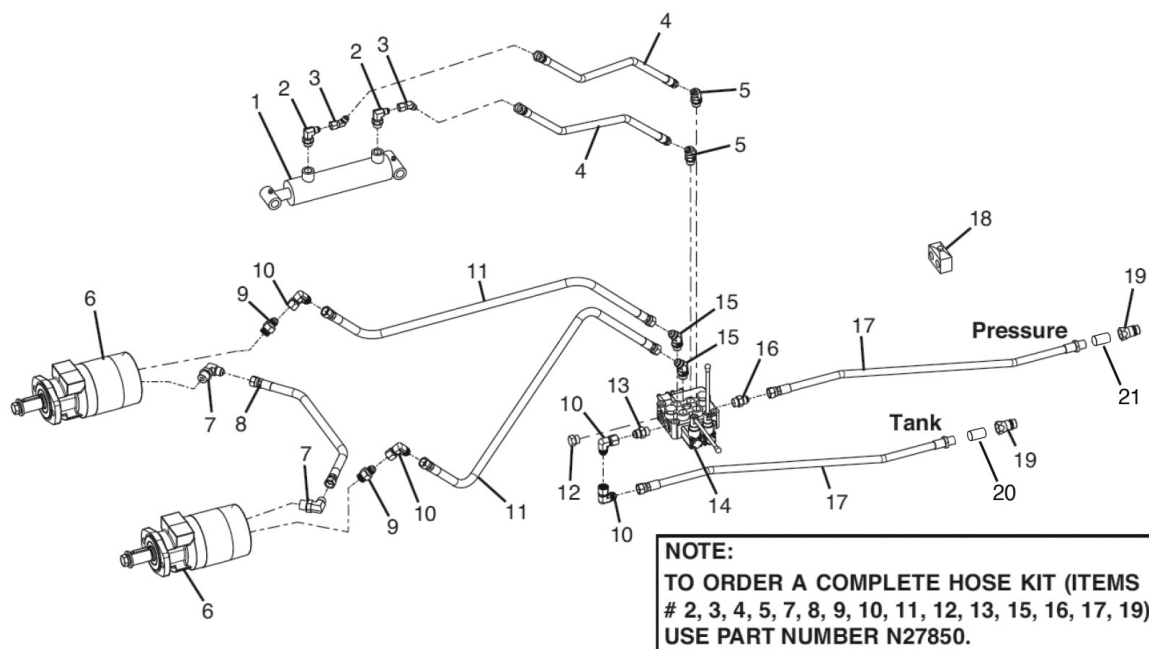
Parts Identification

Swing Auger Components without Pan (N29230) - GBL12 only

#	QTY.	PART #	DESCRIPTION
1	3	N28436	BOLT, 5/16" X 2-1/4" GR5
2	4	4228	WASHER, 5/16" LOCK
3	3	N28927	WASHER, FLAT 5/16 SAE
4	1	N37627	VALVE, 2 SECTION M45 HYD CONT
5	3	N47855	BOLT, 3/8" X 1-1/4" SER FLG
6	1	N40051	ADAPTER PLATE
7	3	4979	NUT, LOCK 3/8" SER FLG
8	1	N27942	TUBE, GBL12 SWING AUG
9	1	N26766	SPOUT, 13IN HP SWING ASSEMBLY
10	1	4237	NUT, 5/16" STANDARD
11	1	N13383	CLAMP, DBL 1/2" SUPP HOSE
12	1	4204	BOLT, 5/16" X 2-1/2" GRADE 5
13	1	N27851	DRIVE, GBL AUGER

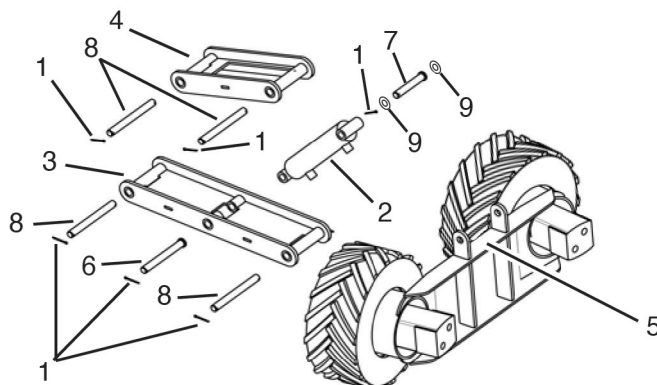
Parts Identification

GBL12 Hydraulic Diagram - GBL12 only



#	QTY.	PART #	DESCRIPTION
1	1	8287	CYLINDER, HYDRAULIC 2" x 6"
*2	2	N20037	ELBOW, 90 DEG - 6MJIC - 8MOR
*3	2	N28837	ELBOW, 45 DEG - 6MJC - 6FJC
*4	2	N27926	HOSE, 3/8" HYD 78" - 6FJC - 6FJC
*5	2	N27928	ELBOW, 45 DEG - 6MJC - 8MOR
6	2	N27605	MOTOR, PARKER HYD 11.9 CU IN
*7	2	N16173	ELBOW, 90 DEG - 8MJC - 10MOR
*8	1	N26397	HOSE, 1/2" HYD 24" - 8FJC - 8FJC
*9	2	N12444	ADAPTER, 8MJIC - 10MOR
*10	4	N24827	ELBOW, 90 DEG - 8FJC - 8MJC
*11	2	N27925	HOSE, 1/2" HYD 78" - 8FJC - 8FJC
*12	1	N25198	PLUG, 8MOR HEX
*13	1	N23447	VALVE, 5 PSI CHECK 8MOR - 8MJC
14	1	N37627	VALVE, 2 SECTION M45 HYDO CONT
*15	2	N24667	ELBOW, 45 DEG - 8MJIC - 8MOR
*16	1	N29074	RESTRICTOR, 8MJC - 8MOR - .031
*17	2	N27924	HOSE, 1/2" X 276" - 8MP - 8FJC
18	1	N13383	ASSY, 1/2" HYD HOSE CLAMP
*19	2	N11825	COUPLER, 1/2" MALE PIONEER
20	1	N24823	DECAL, TANK
21	1	N24822	DECAL, PRESSURE

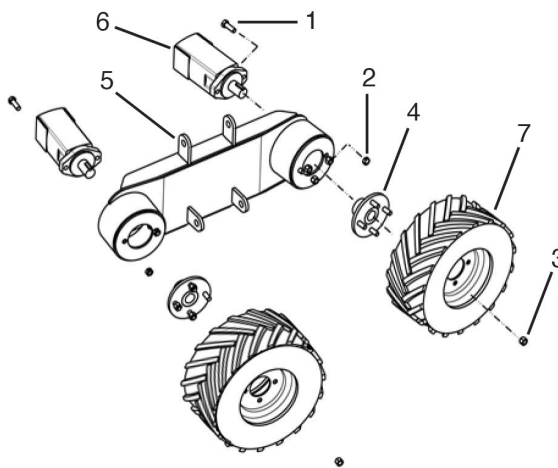
Swing Auger Drive (N27851) - GBL12 only



For parts breakdown of item 5 (N27532), see below.

#	QTY.	PART #	DESCRIPTION
1	10	4099	PIN, COTTER 1/8" x 1 - 1/2"
2	1	8287	CYLINDER, HYDRAULIC 2" x 6"
3	1	N27520	LINK, GBL AUGER DRIVE LONG
4	1	N27526	LINK, GBL AUGER DRIVE SHORT
5	1	N27532	ASSEMBLY, GBL SWING AUGER DRIVE
6	1	N27614	PIN, 3/4" x 6 - 1/4"
7	1	N27615	PIN, 3/4" x 4 - 1/4"
8	4	N27629	ROD, GBL AUG DRIVE 3/4"
9	2	4071	WASHER, 3/4" FLAT

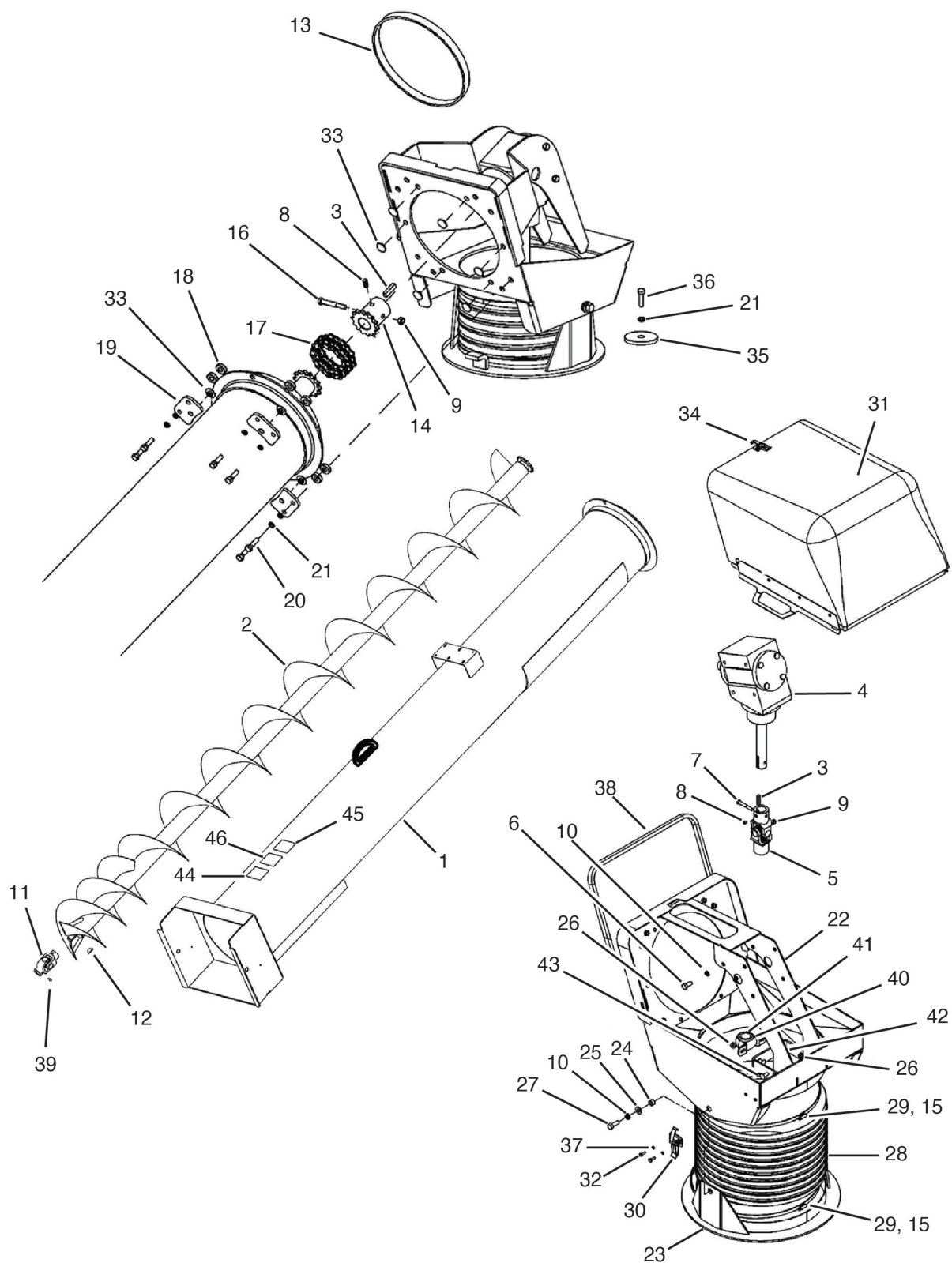
Swing Auger Drive Assembly (N27532) - GBL12 only



#	QTY.	PART #	DESCRIPTION
1	4	203139	BOLT, GBL SWING AUG
2	4	4054	NUT, LOCK 1/2"
3	8	4318	NUT, LUG 1/2" UNF
4	2	N26314	HUB, GBA DRIVE WHEEL ADAPTER
5	1	N27533	FRAME, GBL AUG DRV
6	2	N27605	MOTOR, PARKER HYD 11.9 CU IN
7	2	N27887	WHEEL, 16 x 6.5 FILLED TIRE & RIM

Parts Identification

Swing Auger - GBL12 only



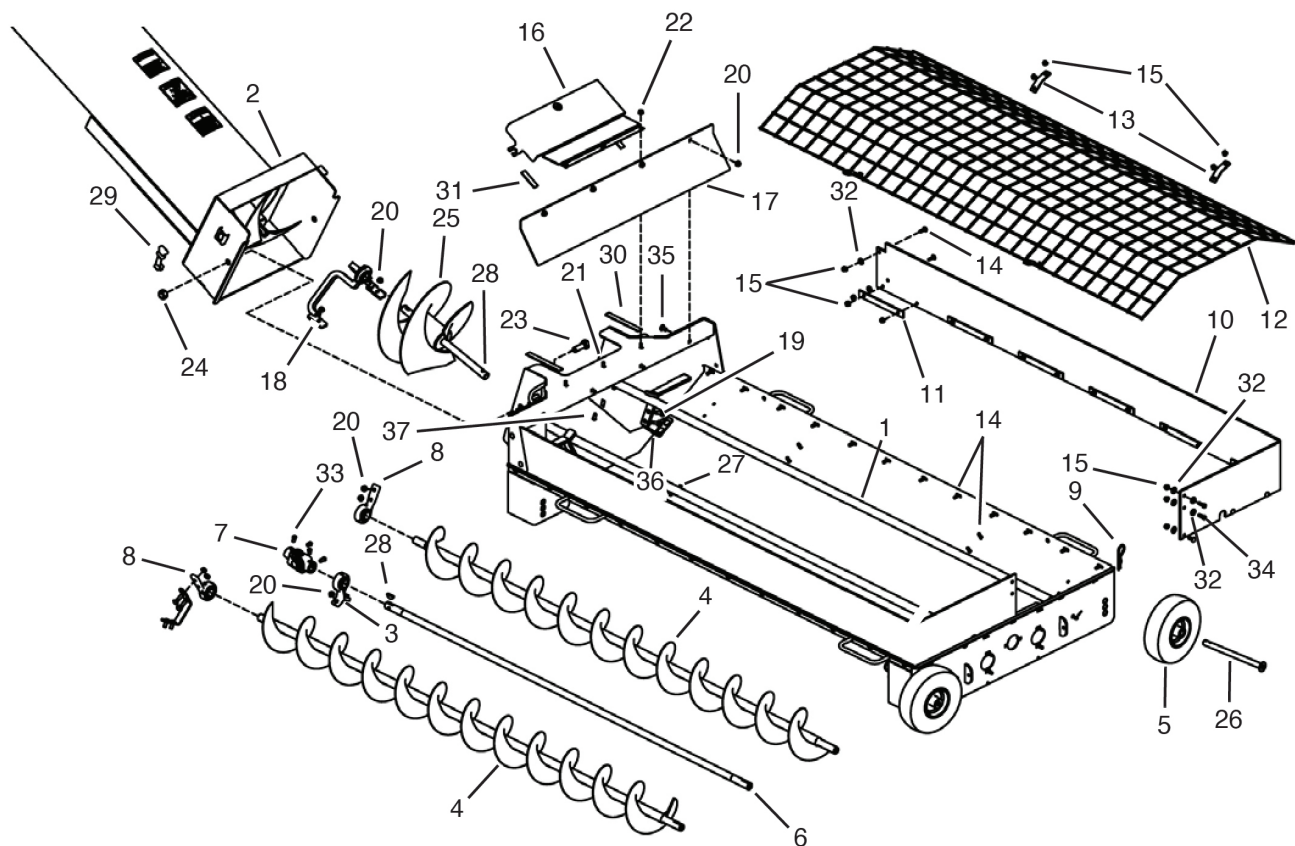
Parts Identification

Swing Auger - GBL12 only

#	QTY.	PART #	DESCRIPTION
1	1	N30407	TUBE, GBL12 SWING AUG 14"
2	1	N30408	AUGER, GBL12 SWING 14"
3	2	7189-03	KEY, 5/16" x 1-1/2"
4	1	N26730	GEARBOX, HD-UPPER, 13" HP MDSA
5	1	N26731	U - JOINT, 1 - 3/8" x 21 SPLINE
6	6	4011	BOLT, 1/2" x 1" GR 5
7	1	4313	BOLT, 3/8" x 2 - 1/2" GR 5
8	2	4354	SCREW, SET 3/8" x 3/8"
9	2	4052	NUT, LOCK 3/8"
10	8	4155	WASHER, LOCK 1/2"
11	1	N26696	U-JOINT, 6R 1" x 1" W/KEYS, EKIT
12	1	N26705	KEY, WOODRUFF 1/4", #810
13	1	N26722	SEAL, SPOUT COVER 13" HP FOAM
14	1	N26716	SPROCKET, #50 x 18T x 1.375 BORE
15	2	N26790	CLAMP, 7" HOSE
16	1	N26752	BOLT, 3/8" x 3" GR 8
17	1	N26717	CHAIN, 50-2 X 18P C/W CONNECTOR
18	8	N26718	BUSHING, 5/16TX 1 x 0.3 PLASTIC
19	4	N26719	PLATE, SWING TUBE RETAINER
20	8	4005	BOLT, 3/8" x 1 - 1/4" GR 5
21	14	4065	WASHER, LOCK 3/8"
22	2	N27917	SWIVEL, SPOUT HP UPPER WELD
23	1	N27916	SWIVEL, SPOUT HP LOWER WELD
24	2	N26729	BUSHING, SWIVEL
25	2	4068	WASHER, FLAT 1/2" SAE
26	6	4979	NUT, FLANGE 3/8"
27	2	4013	BOLT, 1/2" x 1 - 1/4" GR 5
28	1	N26728	HOSE, DOWNSPOUT 18" ID x 12
29	2	N26724	CLAMP, 10" HOSE HS 164
30	2	N26725	LATCH, ASSEMBLY LARGE
31	1	N26791	COVER, SPOUT ASSEMBY PLASTIC
32	4	4340	BOLT, 1/4" x 3/4" GR 5
33	10	N26720	BUSHING, PLASTIC WEAR/SLIDER
34	1	N22325	LATCH, ASSEMBLY SMALL
35	6	N26721	WASHER, SWING TUBE MOUNT LARGE
36	6	4195	BOLT, 3/8" x 1" GR 5
37	4	4231	WASHER, LOCK 1/4"
38	1	N26732	SEAL, SPOUT COVER
39	2	N26793	SCREW, SQ. HD SET 3/8" x 1/2"
40	1	N26726	HOUSING, BEARING ONLY 1 - 1/4"
41	1	N26727	BEARING, 1 - 3/8" WD INSERT ONLY
42	1	N26723	MOUNT, SPOUT STEADY BEARING
43	6	4034	BOLT, CARRIAGE 3/8" x 1"
44	1	N26682	DECAL, MOVING PART HAZARD
45	1	N26795	DECAL, KEEP SHIELDS IN PLACE
46	1	N26796	DECAL, KEEP HANDS AND FEET

Parts Identification

Swing Hopper Main Assembly - GBL12 only



#	QTY.	PART #	DESCRIPTION
1	1	N26734	HOPPER, BD LOADER WELD
2	1	N27942	TUBE, GBL12 SWING AUGER (W/AUGER)
3	1	N31081	HANGER, DRIVELINE ASSEMBLY
4	2	N26733	FLIGHT, 13" HP HOPPER LONG
5	2	N26695	WHEEL, 10" OD x 3/4" BORE
6	1	N26736	DRIVESHAFT, HOPPER 13" HP LONG
7	1	N26696	U-JOINT, 6R 1" x 1" W/KEYS, EKIT
8	2	N31082	HANGER, FLIGHT ASSEMBLY
9	2	N26740	CLIP, HAIR PIN .177" x 3 - 3/4"
10	2	N26735	EXTENSION, RUBBER HOPPER LONG

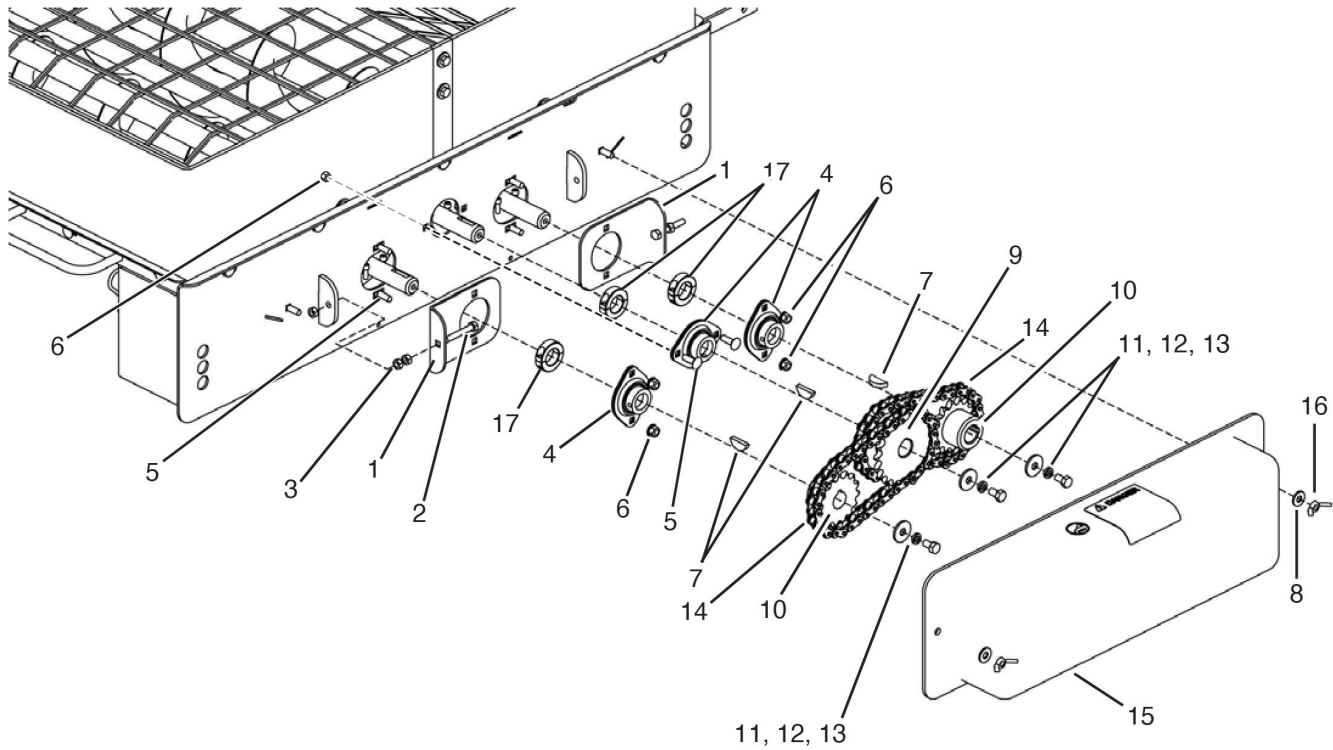
Parts Identification

Swing Hopper Main Assembly - GBL12 only

#	QTY.	PART #	DESCRIPTION
11	14	N26698	STRAP, HOLD DOWN
12	1	N26739	GRATE, HOPPER SAFETY LONG
13	4	N26699	RETAINER, HOPPER MESH
14	40	N26741	BOLT, CARRIAGE 5/16" x 1"
15	42	N26742	NUT, 5/16" FLANGE LOCK
16	1	N26700	COVER,TRANSITION
17	1	N26701	PLATE, BAFFLE
18	1	N31083	MOUNT, TRANSITION ASSEMBLY
19	4	1355	BOLT, CARRIAGE 3/8" x 1 - 1/2"
20	12	4979	NUT, FLANGE 3/8"
21	3	4258	BOLT, CARRIAGE 5/16" x 3/4"
22	3	4051	NUT, LOCK 5/16"
23	2	N31085	BOLT, SHOULDER 3/4" x 1" GR 5
24	2	N31086	LOCKNUT, 5/8" STOVER
25	1	N26703	FLIGHT, TRANS -13HP, CHROMED
26	2	N26704	PIN, SL HOPPER WHEEL
27	2	N26743	BOLT, 3/8" x 1" SERRATED FLANGE
28	1	N26705	KEY, WOODRUFF 1/4", #810
29	2	N33298	LATCH, RUBBER, BASELESS
30	2	N26707	SEAL, FOAM 10, 13 HOPPER
31	2	N26761	SEAL, HP HOPPER TRANS FOAM
32	6	4369	WASHER, FLAT 5/16"
33	4	N26799	SCREW, SQ. HD SET 3/8" x 3/4"
34	2	4203	BOLT, 5/16" x 1" GR 5
35	4	4033	BOLT, CARRIAGE 3/8" x 3/4"
36	2	N31084	SUPPORT, FLIGHT HANGER
37	2	4034	BOLT, CARRIAGE 3/8" - x 1"

Parts Identification

Swing Hopper Drive - GBL12 only

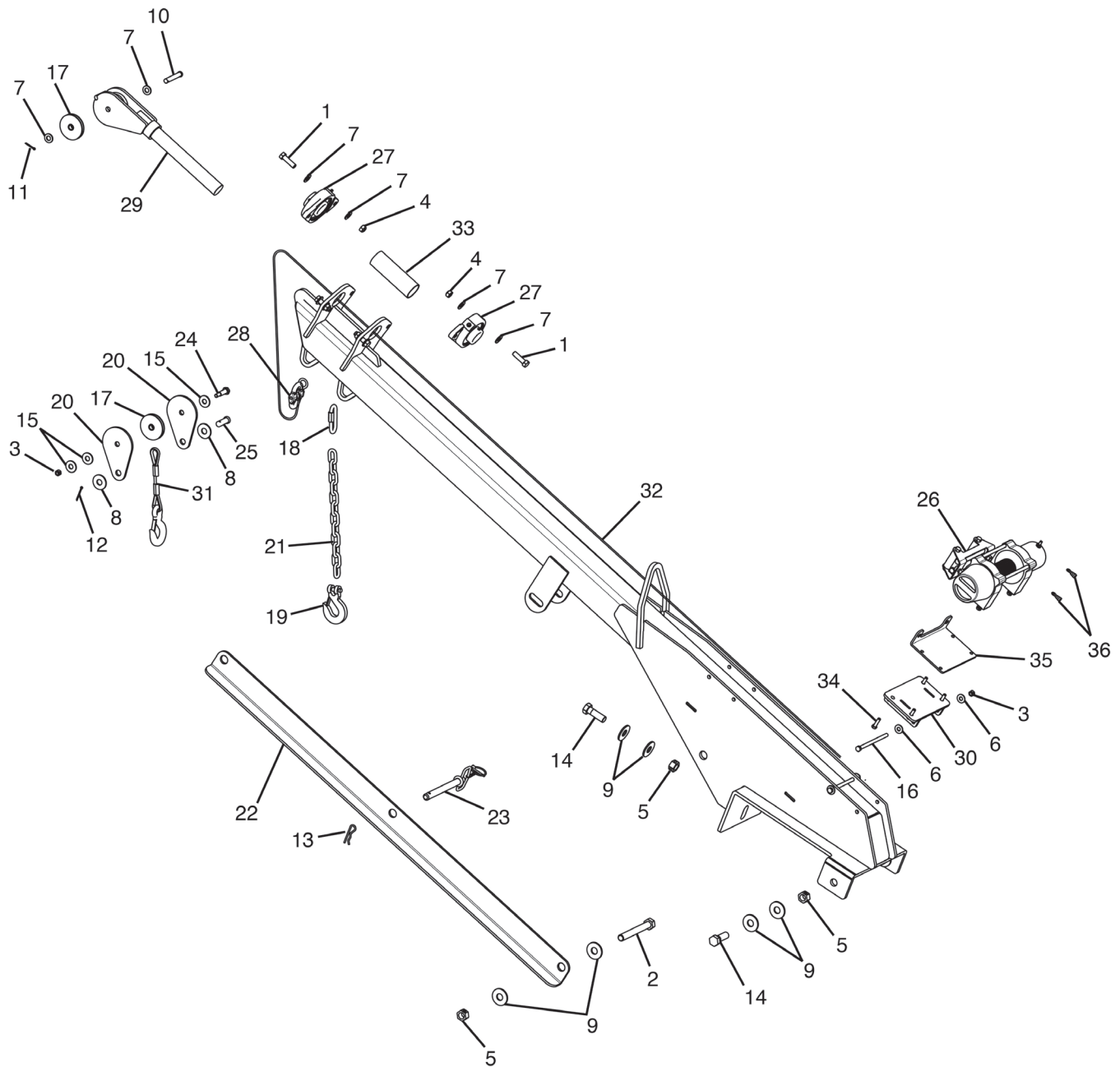


Swing Hopper Drive - GBL12 only

#	QTY.	PART #	DESCRIPTION
1	2	N26709	PLATE, CHAIN TENSION
2	2	N26744	BOLT, 5/16" x 2" FULL THREAD
3	6	4237	NUT, STANDARD 5/16"
4	3	N26710	BEARING, 1" - 2 BOLT FLANGETTE
5	6	N26741	BOLT, 5/16" x 1" CARRIAGE
6	6	N26742	NUT, 5/16" FLANGE LOCK
7	3	N26705	KEY, WOODRUFF 1/4", #810
8	2	4369	WASHER, FLAT 5/16"
9	1	N26711	SPROCKET, 50 - 21T DOUBLE SNGL
10	2	N26712	SPROCKET, 50 - 15T C/W KEY
11	3	N26794	WASHER, 1-1/4" OD x 3/8" ID
12	3	4065	WASHER, LOCK 3/8"
13	3	N26746	BOLT, 3/8" x 5/8"
14	2	N26713	CHAIN, #50 x 35 P, CONN & OFF
15	1	N26714	GUARD, HOPPER CHAIN
16	2	N26747	NUT, WING 5/16"
17	3	N31087	COLLAR, 1" ID SPLIT

Parts Identification

Swing Auger Hopper Lift (N33220) - GBL12 only



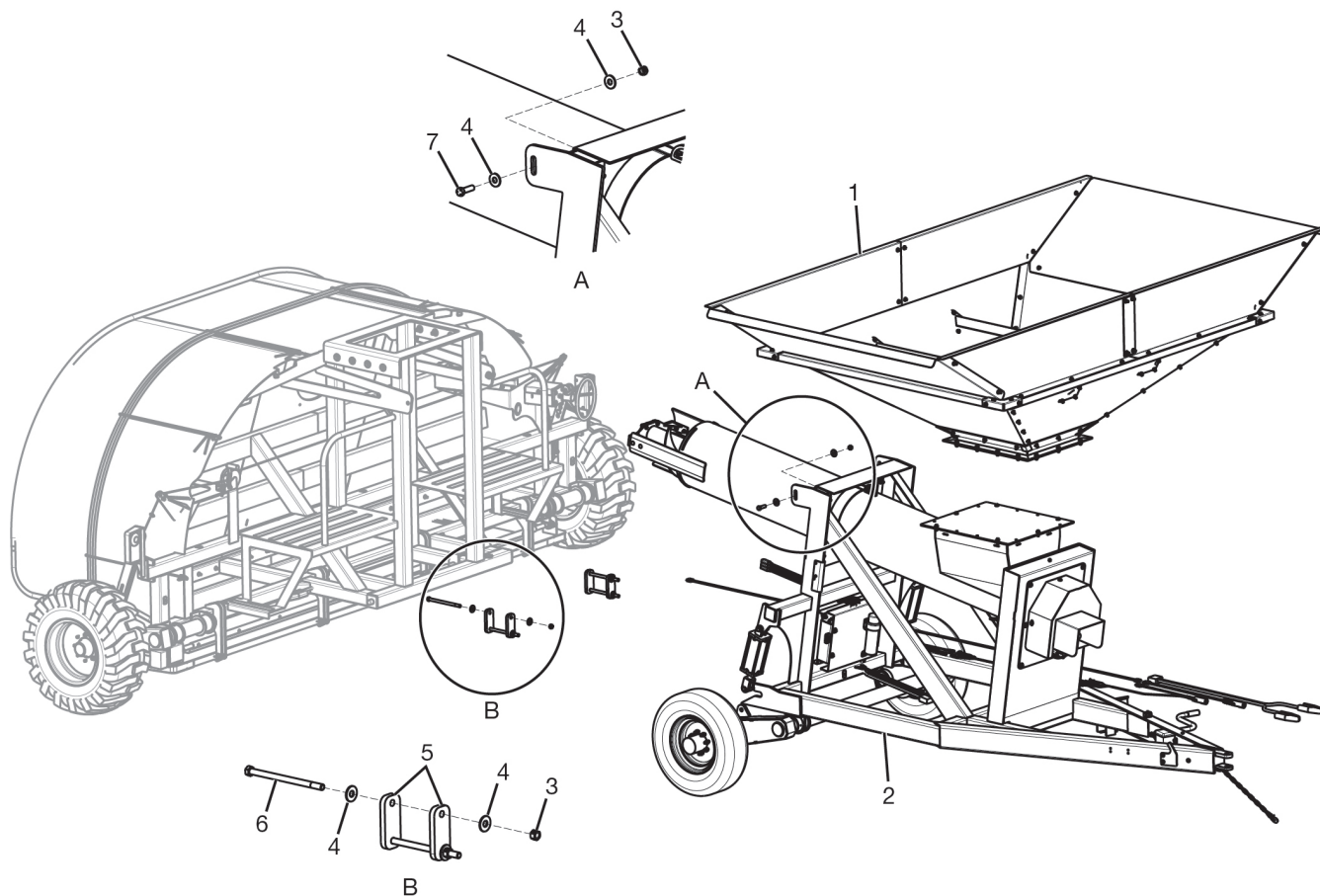
Parts Identification

Swing Auger Hopper Lift (N33220) - GBL12 only

#	QTY.	PART #	DESCRIPTION
1	4	4014	BOLT, 1/2" x 1 3/4" GRADE 5
2	1	4029	BOLT, 3/4" x 6" GRADE 5
3	3	4052	NUT, LOCK 3/8"
4	4	4054	NUT, LOCK 1/2" TOP
5	4	4056	NUT, LOCK 3/4"
6	4	4064	WASHER, FLAT 3/8"
7	10	4068	WASHER, 1/2" SAE FLAT
8	2	4069	WASHER, FLAT 5/8"
9	8	4071	WASHER, 3/4" FLAT
10	1	4088	PIN, DEFLECTOR 1/2" x 3" TOP
11	1	4098	PIN, COTTER 1/8" x 1 1/2"
12	1	4099	PIN, COTTER 1/8" x 1 1/2"
13	1	4393	CLIP, HAIRPIN 5/32" x 2 1/2"
14	3	4475	BOLT, 3/4" x 2 1/4" GRADE 5
15	3	4486	WASHER, 1/2" FLAT
16	2	4520	BOLT, 3/8" x 6" GRADE 5
17	2	N22913	PULLEY, 3/16" CABLE 2 1/2" DIA
18	1	N10177	LINK, 3/8" CHAIN CONNECTOR
19	1	N27875	HOOK, 5/16" CLEVIS - WARN WNCH
20	2	N27895	PLATE, GBL SWING AUG CABLE BLK
21	1	N27957	CHAIN, GBL12 SWING HOPPER SAFETY
22	1	N27961	BAR, GBL12 SWING HOPPER SPACER
23	1	N27964	PIN, 3/4" x 6 1/4" HITCH WITH HDL
24	1	N29072	BOLT, SHOULDER 1/2" x 1 5/16"
25	1	N29073	PIN, 5/8" x 1 1/2" PLATED (1 3/4")
26	1	201933	WINCH, WARN VRX 45
27	2	N30230	BEARING, 1 1/2" DODGE 2 BLT FLG
28	1	N30678	LINK, 3/8" CM COUPLING
29	1	N33076	PIVOT, GBA SWG AUG LIFT
30	1	N33114	MOUNT, WARN RT40 GBA WINCH
31	1	N33163	HOOK, 7" CABLE DOUBLE EYE
32	1	N33221	ARM, GBL12 WLDD SWG AUG LIFT
33	1	N33235	SHIELD, GBL12 LIFT ARM PIVOT PNT
34	4	N35220	BOLT, M8 X 30 GR 8.8
35	1	N30172	MOUNT, WARN RT40 FAIRLEAD
36	2	N30835	TERMINAL, 6 GA 1/4" RING INS

Parts Identification

GBL12C Front Frame Assembly - GBL12C only

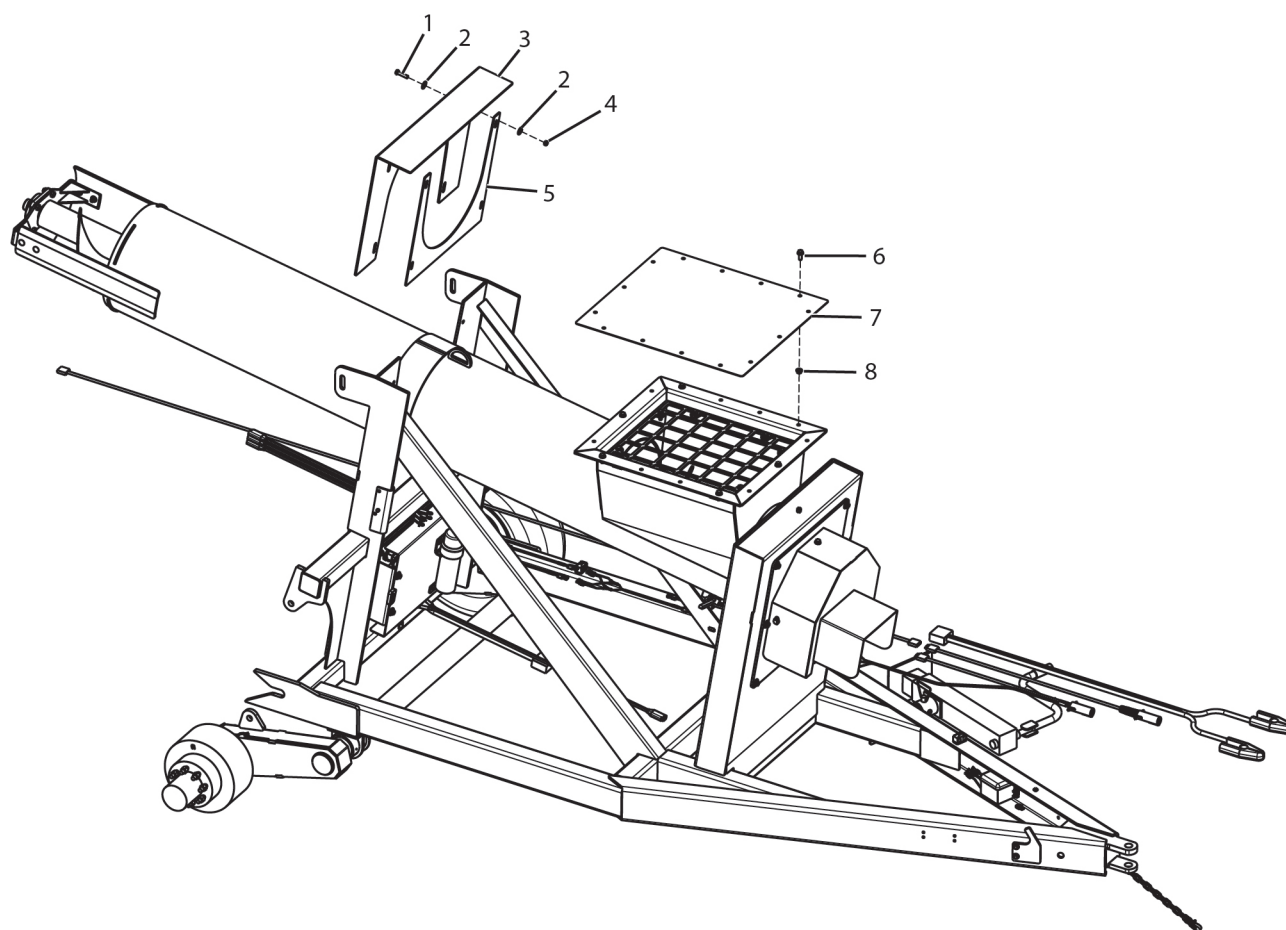


For parts breakdown of item 1 (N30147), see page 118.

For parts breakdown of item 2 (N30872), see pages 111 through 115.

#	QTY.	PART #	DESCRIPTION
1	1	N30147	HOPPER, GBL12 COMPLETE WITH EXT
2	Reference Only	N30872	HITCH, GBL12C FRONT FRAME
3	6	4056	NUT, LOCK 3/4
4	12	4071	WASHER, 3/4" FLAT
5	4	N27753	STRAP, GBL12 CONNECTOR
6	4	N27754	BOLT, 3/4" X 12" GR 8
7	2	4224	BOLT, 3/4" X 2-1/2" GRADE 5

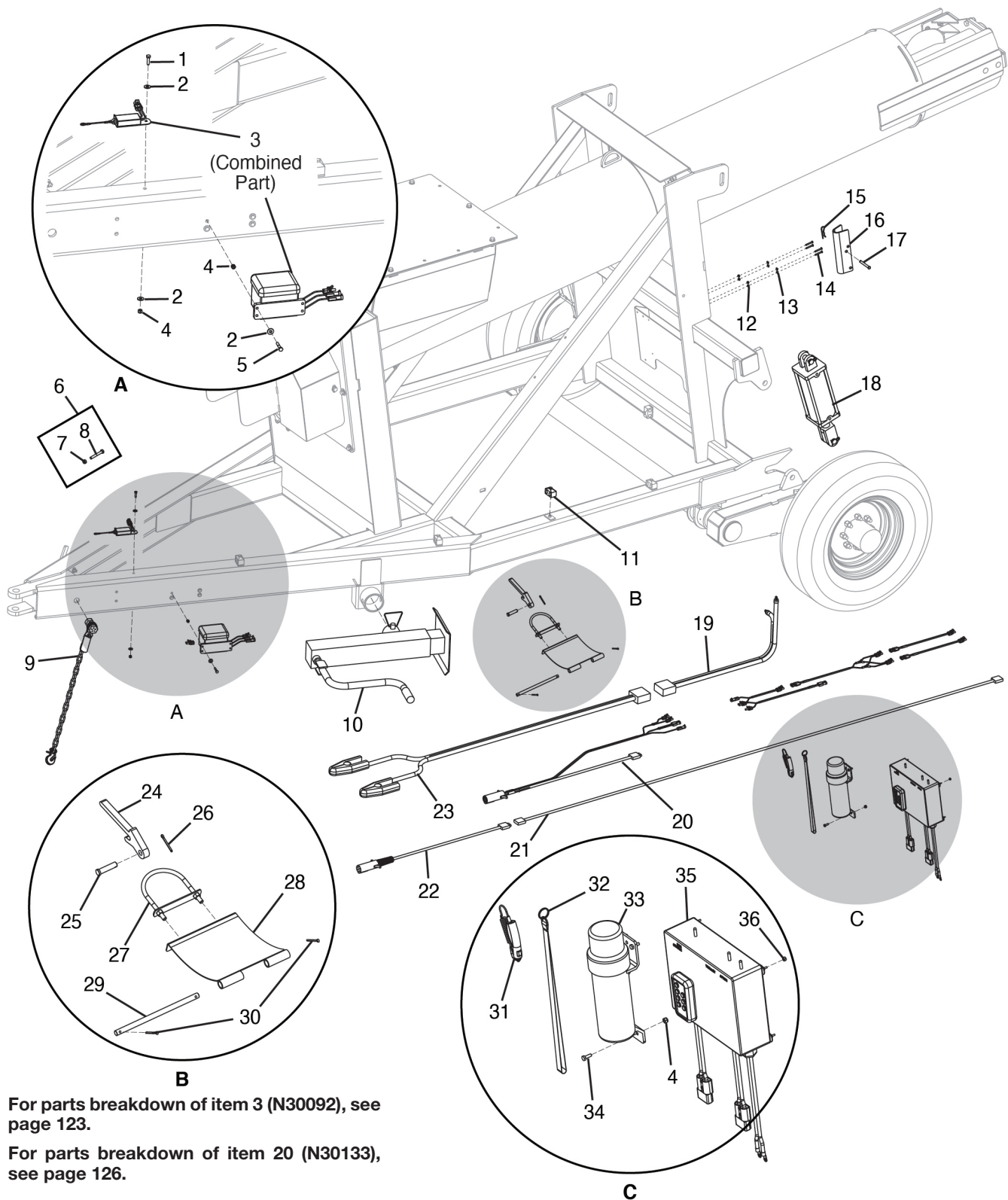
GBL12C Front Frame Hitch Assembly (N30872) - GBL12C only



#	QTY.	PART #	DESCRIPTION
1	4	4015	BOLT, 1/2" X 2" GRADE 5
2	8	4486	WASHER, 1/2" FLAT
3	1	N27666	BRACKET, GBL12 AUG LOCK DOWN
4	4	4054	NUT, LOCK 1/2" TOP
5	1	N29022	PLATE, GBL12 AUGER BOTTOM SUP
6	6	N18360	BOLT, 1/2-13 X 1-1/4 SER FLG
7	1	N33379	COVER, GBL12 HOPPER THROAT
8	6	N29075	NUT, LOCK 1/2" SERRATED FLANGE

Parts Identification

GBL12C Front Frame Assembly - GBL12C only



For parts breakdown of item 3 (N30092), see page 123.

For parts breakdown of item 20 (N30133), see page 126.

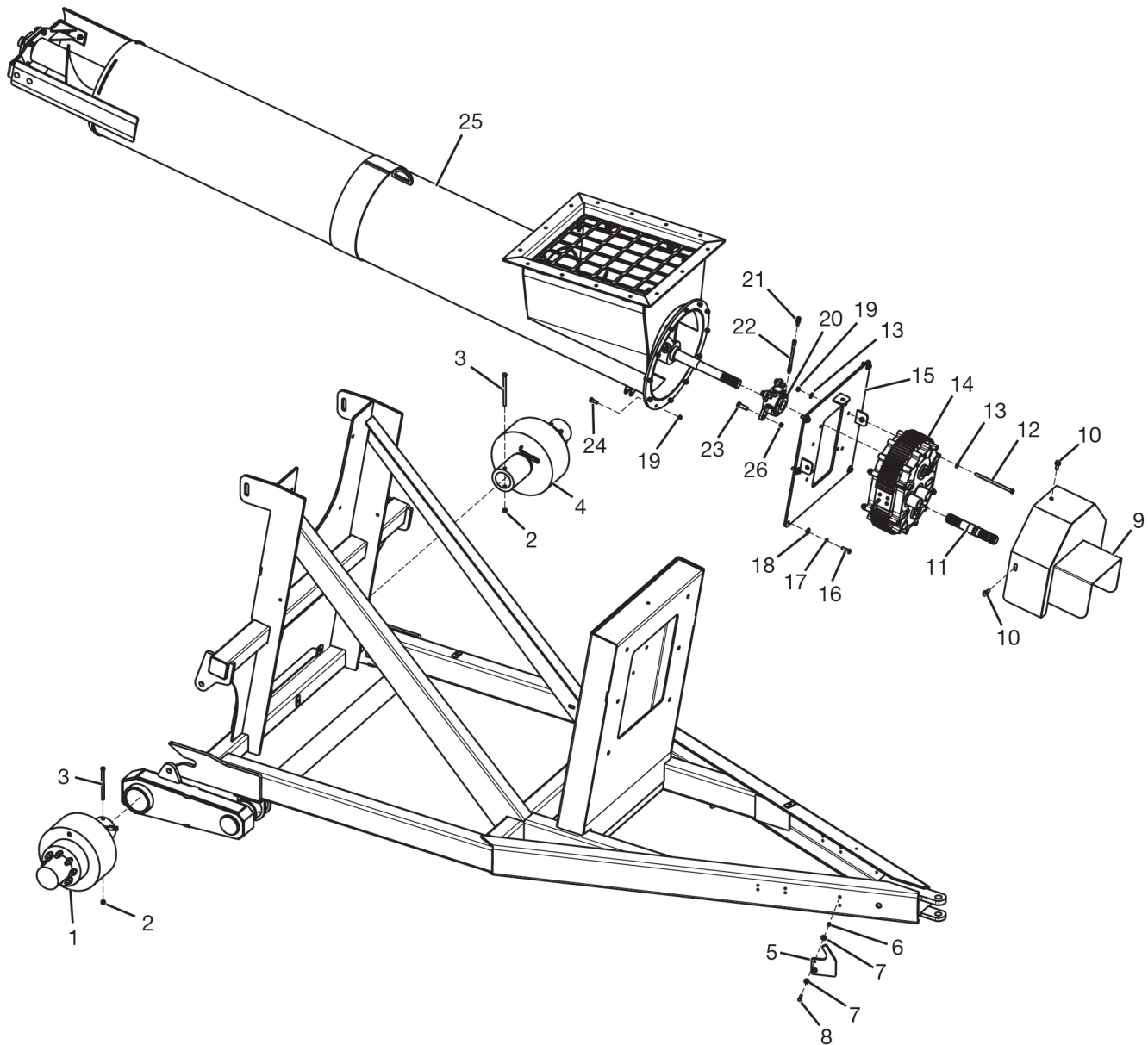
Parts Identification

GBL12C Front Frame Assembly - GBL12C only

#	QTY.	PART #	DESCRIPTION
1	1	4000	BOLT, 1/4" X 1" GRADE 5
2	6	3183	WASHER, FLAT 1/4"
3	1	N30092	WIRE, BRAKE BATTERY
4	8	4996	NUT, LOCK 1/4" NYLOCK
5	4	4528	BOLT, 1/4" X 1-1/4" GRADE 5
6	1	202849	KIT, GBL12C PTO SHEAR BOLT
7	1	4051	NUT, LOCK 5/16"
8	1	4227	BOLT, 5/16" X 2" GRADE 5
9	1	N50260	CHAIN,SAFETY 21,000LB W/ HDWR
10	1	N13732	JACK, PULL-TYPE HITCH
11	5	N21365	CLAMP, 3/8" DOUBLE HOSE
12	4	N16334	NUT, NYLON INSERT #10
13	4	4555	WASHER, FLAT #10
14	4	N22382	BOLT, BHCS #10-32 X 1.5
15	2	4336	CLIP, HAIRPIN 1/8" X 2-1/4"
16	2	N19768	STOP, CYLINDER 9.5" SAFETY
17	2	4093	PIN, 3/8" X 3" (2.75" USEABLE)
18	2	N25166	CYLINDER, HYD 4" X 8" - 3000 PSI
19	1	N26639	HARNESS, GBL12 MAIN POWER
20	1	N30133	GROUP, GBL12 WIRING
21	1	N30647	HARNESS, 4-FLAT X 15 FT EXT
22	1	N22784	HARNESS, GBU 4' BRAIDED TOUNGE
23	1	N26638	HARNESS, GBL12 TRACTOR BATTERY
24	1	N23773	LATCH, GBL TRAP DOOR
25	1	4432	PIN, 1/2" X 1-3/4" (2" OVERALL)
26	1	4325	PIN, COTTER 3/16" X 1-1/2"
27	1	N23775	U-BOLT, 3/8" X 3-1/2" X 5"
28	1	N27979	DOOR, GBL12 AUGER CLEAN OUT
29	1	N23789	PIN, GBL AUGER BOTTOM DOOR SHIELD
30	2	4092	PIN COTTER 5/32" X 2"
31	1	N39055	CHARGER, CAR MICRO USB
32	1	N33024	LANYARD, LOFTNESS KEYCHAIN
33	1	N19600	HOLDER, 01-315A STND.MANUAL
34	3	4340	BOLT, 1/4" X 3/4" GRADE 5
35	1	N39094	RECEIVER, 3 CONTACT LOFTNESS
36	4	N16133	NUT, NYLON INSERT #8

Parts Identification

GBL12C Front Frame Assembly (Cont'd) - GBL12C only



For parts breakdown of item 1 (202847), see page 120.

For parts breakdown of item 4 (202846), see page 120.

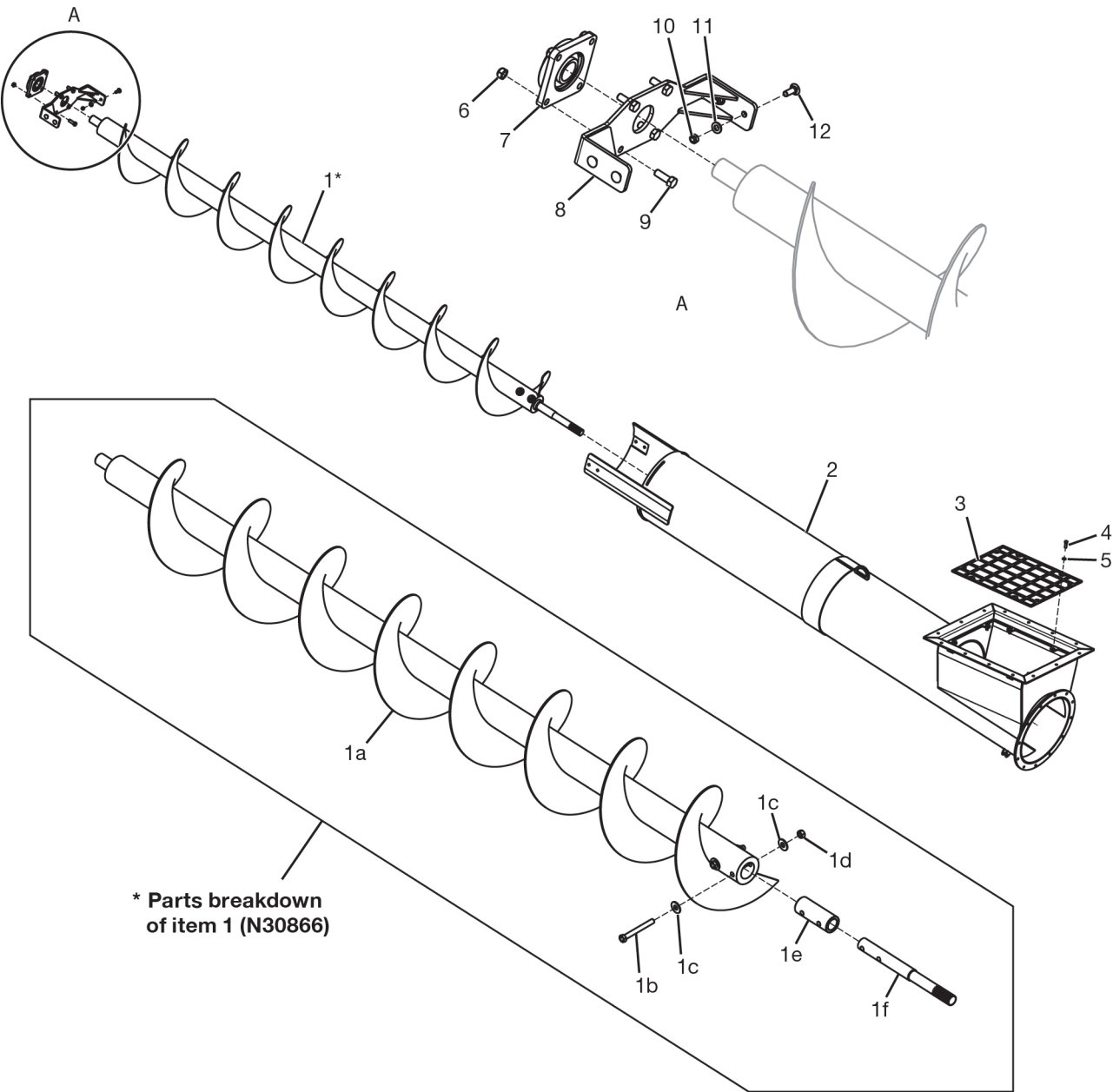
Parts Identification

GBL12C Front Frame Assembly (Cont'd) - GBL12C only

#	QTY.	PART #	DESCRIPTION
1	1	202847	AXLE, GBU12 RIGHT WIRED
2	2	4436	NUT, 1/2" LOCK FN TD GRADE 8
3	2	4330	BOLT, 1/2" X 7" GR 8
4	1	202846	AXLE, GBU12 LEFT WIRED
5	1	N30863	HOLDER, GBL10 PTO END
6	2	4052	NUT, LOCK 3/8"
7	4	4064	WASHER, FLAT 3/8"
8	2	4006	BOLT, 3/8" X 1-1/2" GRADE 5
9	1	N30821	SHIELD, GBL12C GEARBOX
10	3	N18360	BOLT, 1/2-13 X 1-1/4 SER FLG
11	1	N26693	SHAFT, GEARBOX
12	4	N116622	BOLT, 1/2" X 9" GRADE 5
13	8	4068	WASHER, 1/2" SAE FLAT
14	1	N26688	GEARBOX, 1.84:1 HEL
15	1	N30826	MOUNT, GBL12C FRONT GEARBOX
16	6	4013	BOLT, 1/2" X 1-1/2" GRADE 5
17	6	4155	WASHER, LOCK 1/2"
18	6	4486	WASHER, 1/2" FLAT
19	16	4054	NUT, LOCK 1/2" TOP
20	1	N30236	BEARING, 2" TAPERED ROLLER
21	1	4304-10	BULKHEAD, FITTING-GREASE HOSE
22	1	4304	HOSE, 15' GREASE W/FITTINGS
23	4	4021	BOLT, 5/8 X 1-3/4 GRADE 5
24	12	4012	BOLT, 1/2" X 1-1/4" GRADE 5
25	1	N30869	AUGER, GBL12C FRT AUGER 20"
26	4	4055	NUT, LOCK 5/8-11 NC TOPLOCK

Parts Identification

20" Front Auger - GBL12C only

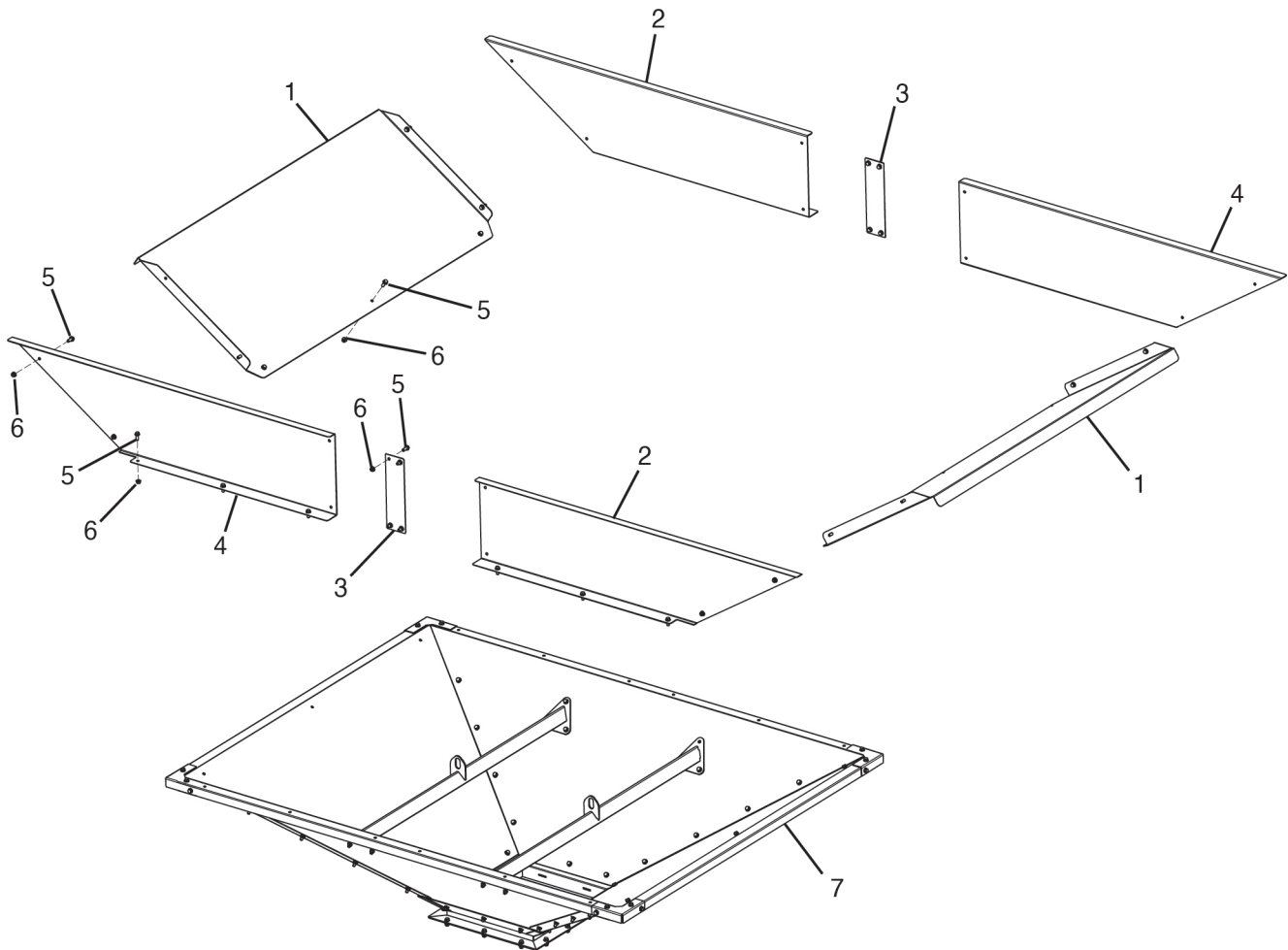


20" Front Auger - GBL12C only

#	QTY.	PART #	DESCRIPTION
1	1	N30866	AUGER, GBL12C COMP
1a	1	N30531	AUGER, GBL12C PUR 18"
1b	2	N16351	BOLT, 3/4" X 6-1/2" FN TH GR 8
1c	4	4071	WASHER, 3/4" FLAT
1d	2	N16352	NUT, LOCK 3/4" GRADE 8 FINE
1e	1	N30870	BUSHING, GBL12C AUGER SHAFT
1f	1	N30871	SHAFT, GBL12C AUGER SPLINED
2	1	N30498	TUBE, GBL12C FRT 20" AUGER
3	1	N29586	SCREEN, GBL12 HOPPER BOLT-IN
4	8	4013	BOLT, 1/2" X 1-1/2" GRADE 5
5	8	4155	WASHER, LOCK 1/2"
6	4	4055	NUT, LOCK 5/8" TOP
7	1	N30235	BEARING, 2" DODGE 4-BLT FLG
8	1	N30562	MOUNT, GBL12C AUG BEARING
9	4	4021	BOLT, 5/8 X 1-3/4 GRADE 5
10	4	4054	NUT, LOCK 1/2" TOP
11	4	4068	WASHER, 1/2" SAE FLAT
12	4	4039	BOLT, CARRIAGE 1/2" X 1-1/2"

Parts Identification

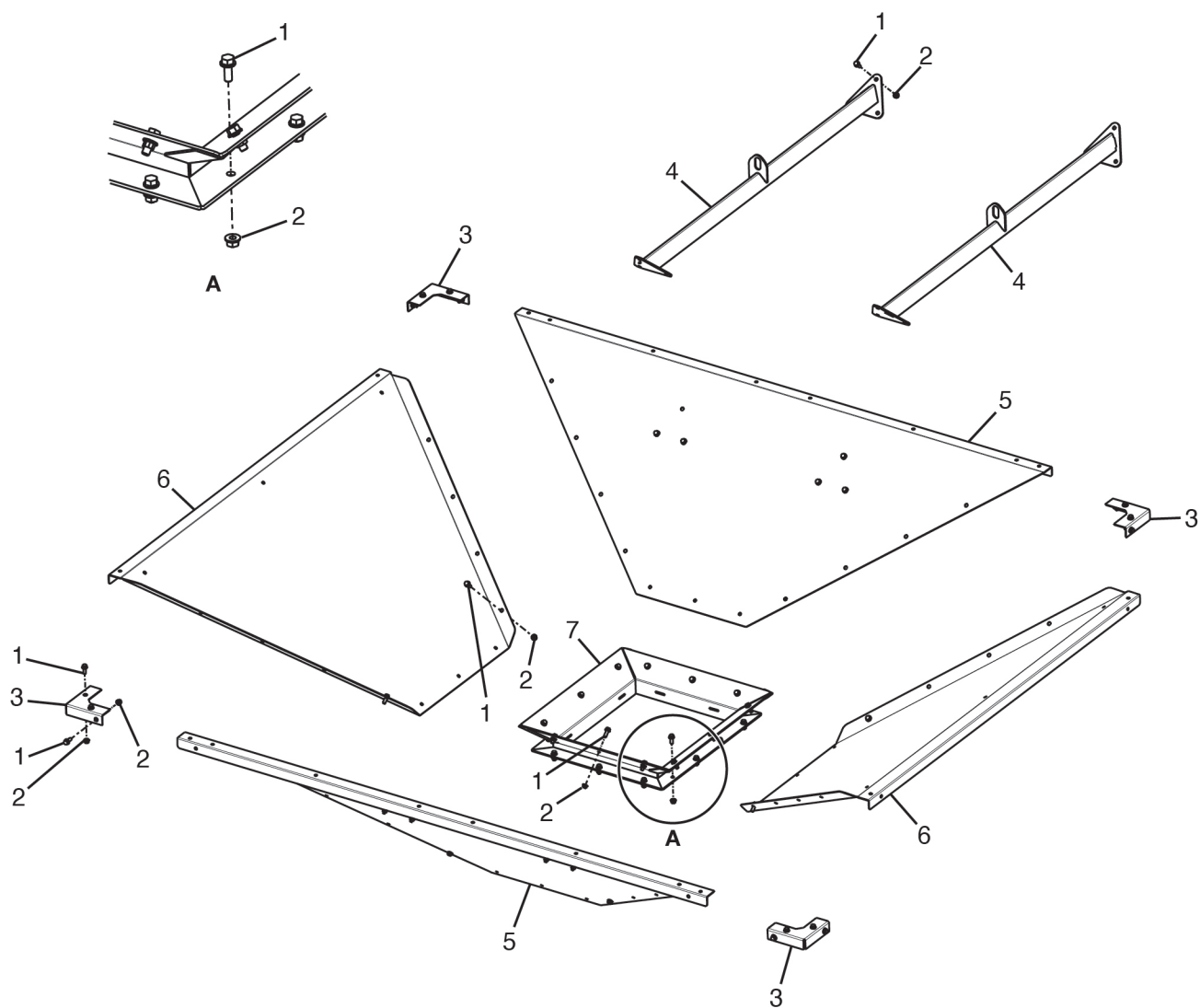
Hopper with Extension (N30147) - GBL12 and GBL12C



For parts breakdown of item 7 (N27322), see page 119.

#	QTY.	PART #	DESCRIPTION
1	2	N29263	PANEL, GBL12 HOPPER EXT FR/BK1
2	2	N29266	PANEL, GBL12 HOPPER FR/BK2
3	2	N29265	PANEL, GBL12 HOPPER EXT SCAB
4	34	N18360	BOLT, 1/2-13 X 1-1/4 SER FLG
5	2	N29262	PANEL, GBL12 HOPPER EXT SIDE
6	34	N29075	NUT, LOCK 1/2" SERRATED FLANGE
7	1	N27322	HOPPER, GBL12 ASSEMBLED

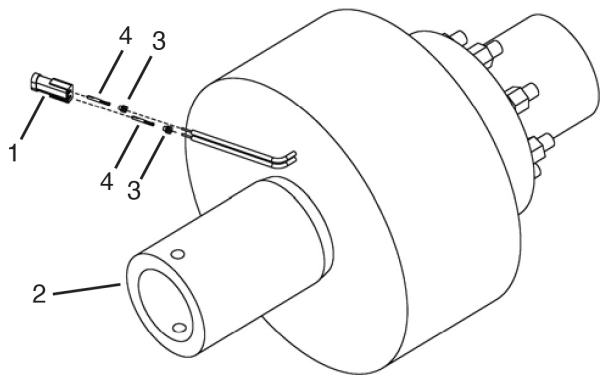
Hopper Hardware (N27322) - GBL12 and GBL12C



#	QTY.	PART #	DESCRIPTION
1	70	N18360	BOLT, 1/2-13 X 1-1/4 SER FLG
2	70	N29075	NUT, LOCK 1/2" SERRATED FLANGE
3	4	N22909	CORNER, GBL HOPPER TOP
4	2	N27339	BRACE, GBL12 HOPPER
5	2	N27335	PANEL, GBL12 HOPPER FRONT/BACK
6	2	N27338	PANEL, GBL12 HOPPER SIDE
7	1	N27323	BASE, GBL12 HOPPER

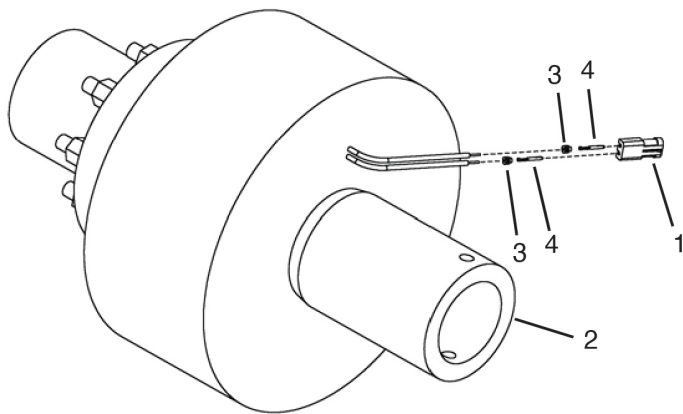
Parts Identification

Right Transport Axle Wired (202847) - GBL12 and GBL12C



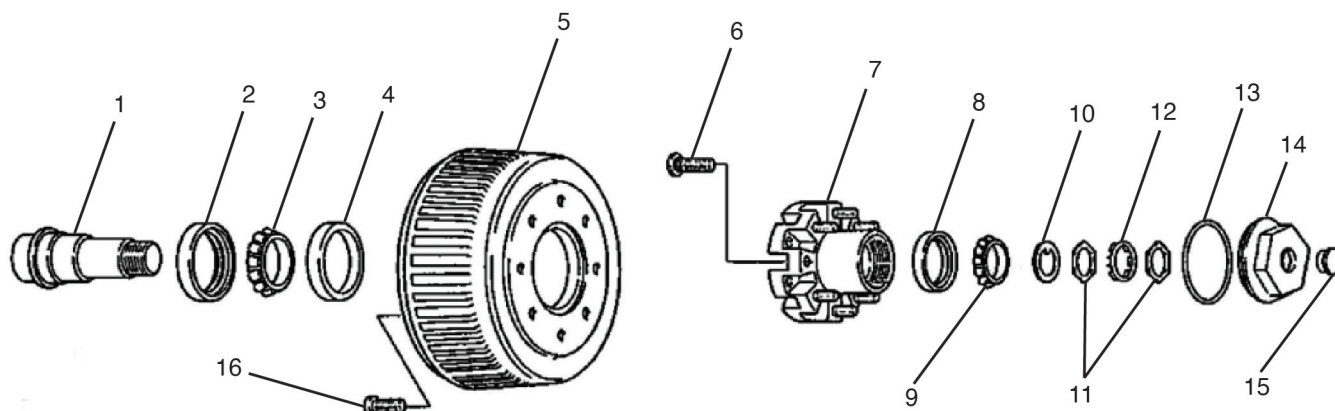
#	QTY.	PART #	DESCRIPTION
1	1	N19839	SHROUD, WP CONTACT 2 - WAY
2	1	202841	AXLE, STUB 6000 LB HALF RIGHT
3	2	N30066	SEAL, WP 14 - 16 GA
4	2	N30067	TERMINAL, WP MALE 14 - 16 GA

Left Transport Axle Wired (202846) - GBL12 and GBL12C



#	QTY.	PART #	DESCRIPTION
1	1	N19839	SHROUD, WP CONTACT 2 - WAY
2	1	202840	AXLE, STUB 6000 LB HALF LEFT
3	2	N30066	SEAL, WP 14 - 16 GA
4	2	N30067	TERMINAL, WP MALE 14 - 16 GA

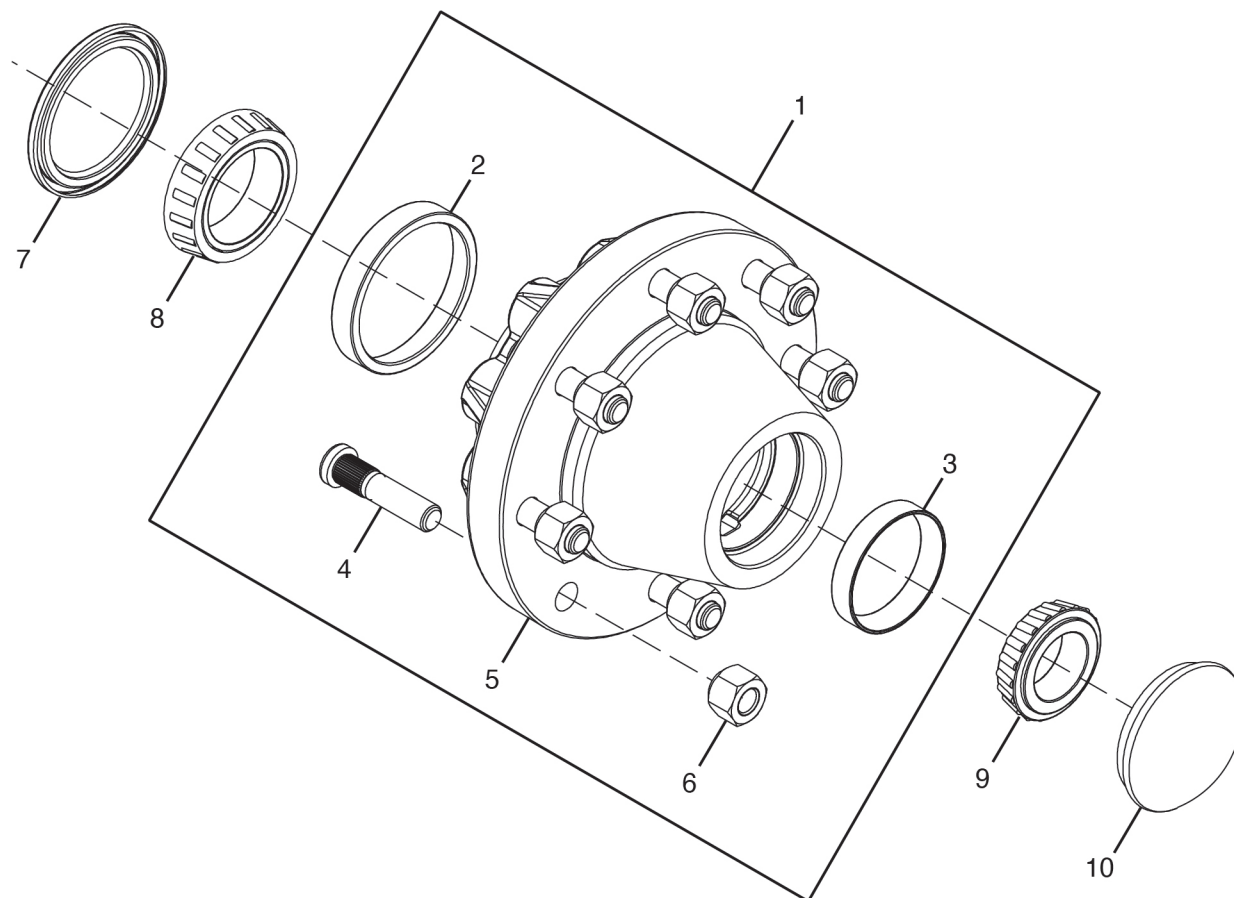
Hub Assembly, Traction/Brake Wheel



#	QTY.	PART #	DESCRIPTION
1	1	N29957	SPINDLE, AXLE 6000 LB HALF
2	1	N29958	SEAL, AXLE 6000 LB OIL (1056)
3	1	N29959	CONE, AXLE 6000 LB INNER BRG (3984)
4	1	N29960	CUP, AXLE 6000 LB INNER BRG (3920)
5	1	N29961	DRUM, AXLE 6000 LB BRAKE (9271)
6	8	N29962	STUD, AXLE 6000 LB WHEEL MNT (7115)
7	1	N29963	HUB, AXLE 6000 LB W / CUP & STD (82148)
8	1	N29964	CUP, AXLE 6000 LB OUTER BRG (28622)
9	1	N29965	CONE, AXLE 6000 LB OUTER BRG (28682)
10	1	N29966	WASHER, AXLE 6000 LB SPINDLE (560)
11	2	N29967	NUT, AXLE 6000 LB SPINDLE (684)
12	1	N29968	WASHER, AXLE 6000 LB TANG (559)
13	1	N29969	O-RING, AXLE 6000 LB OIL CAP (1050)
14	1	N29970	CAP, AXLE 6000 LB OIL (2136)
15	1	N29971	PLUG, AXLE 6000 LB OIL CAP (4632)
16	8	N29973	SCREW, AXLE 6000 LB DRUM MNT (7244)

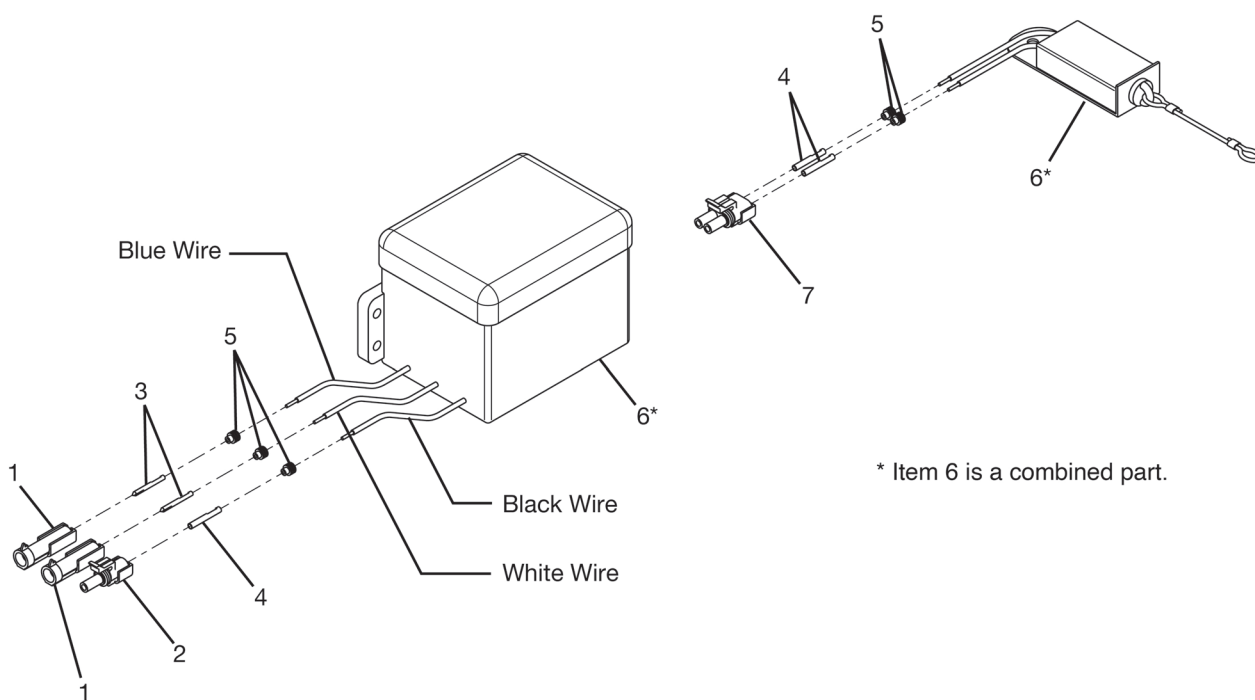
Parts Identification

Hub, 8 Bolt 8" Diameter (N25138) - GBL12 and GBL12C



#	QTY.	PART #	DESCRIPTION
1	1	N157998	HUB, 8-BOLT SUBASSEMBLY
2	1	N158004	CUP, BEARING 8-BOLT HUB
3	1	8082-02	CUP, BEARING (LARGE) 6BLT. HUB LM501310
4	8	N158000	STUD, HUB 5/8"-18 UNF 2-3/4"
5	1	N157999	CASTING, HUB 8-BOLT (NO PARTS)
6	8	N158001	NUT, LUG 5/8-18 UNF GR 5 ZP
7	1	N158003	SEAL, 8 BOLT HUB GREASE
8	1	N158005	CONE, BRG 8-BOLT HUB
9	1	8082-03	CONE, BRG. (LARGE) 6 BOLT HUM LM67048
10	1	N158002	CAP, END 8-BOLT HUB

Brake Battery Wired (N30092) - GBL12 and GBL12C

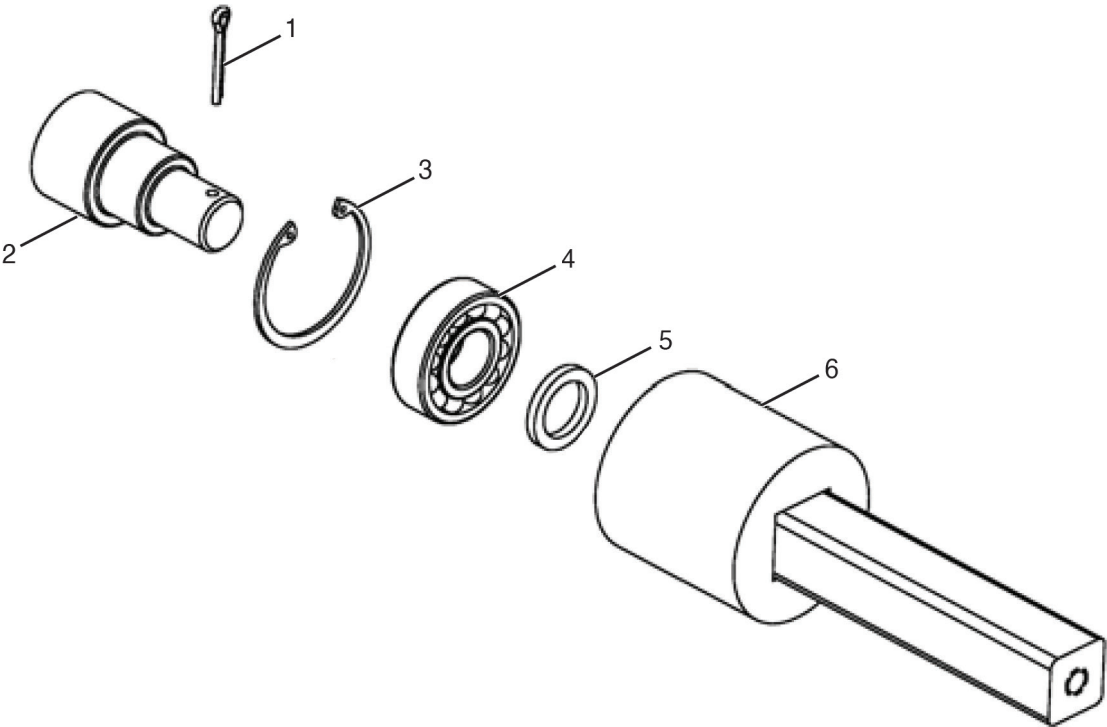


* Item 6 is a combined part.

#	QTY.	PART #	DESCRIPTION
1	2	N30069	SHROUD, WP CONTACT 1-WAY
2	1	N30070	TOWER, WP CONTACT 2-WAY
3	2	N30067	TERMINAL, WP MALE 14-16 GA
4	3	N30068	TERMINAL, WP FEMALE 14-16 GA
5	5	N30066	SEAL, WP 14-16 GA
6	1	N29355	BATTERY, BRAKE AWAY SYSTEM
7	1	N19840	TOWER, WP CONTACT 2-WAY

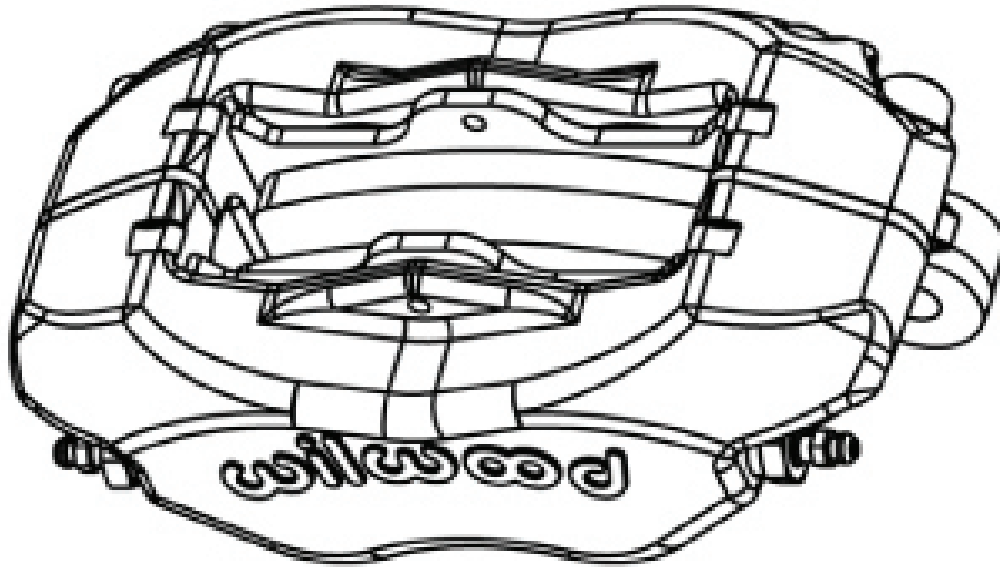
Parts Identification

Brake Actuator (N27581) - GBL12 and GBL12C



#	QTY.	PART #	DESCRIPTION
1	1	4098	PIN, COTTER 1/8" x 1 - 1/2"
2	1	N27571	ADAPTER, GBL BRAKE PSHR INNER
3	1	N27578	RING, SNAP 1 - 7/8" ID
4	1	N27572	BEARING, INSERT 0.7874 ID DOUBLE ROW
5	1	N27575	WASHER, GBL BRAKE TUBE PSHR
6	1	N27577	PUSHER, GBL TITAN BRAKE TUBE

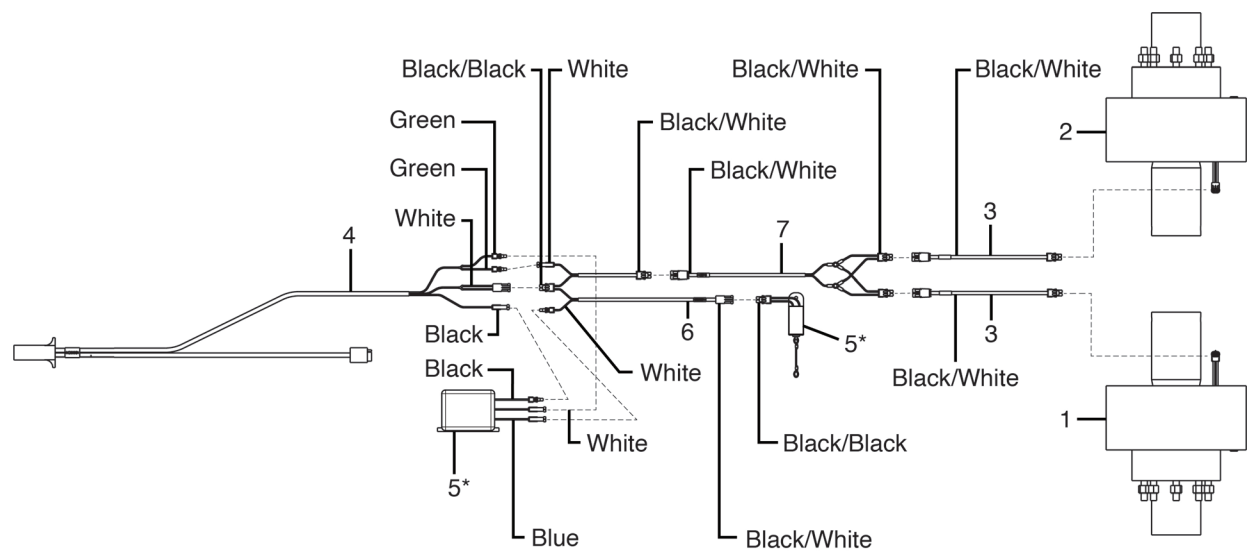
Brake Caliper (N22794) - GBL12 and GBL12C



WILWOOD BRAKE CALIPER SERVICE PARTS			
DESCRIPTION	WILWOOD P/N	LOFTNESS P/N	QTY
Cotter Pins 1/8" x 3" (Forged Billet Dynalite Caliper)	WIL - 180 - 0055	N26517	Set of 10
Caliper Body Seal (Sold Separately)	WIL - 210 - 2582	N26518	2 Per Brake
Brake Bleeder Screws 1/8" - 27 NPT	WIL - 220 - 0627	N26519	Set of 4
Brake Caliper O-Ring Seals, Fits 1.75" Dia. Pistons (Rebuild Kit Rubber)	WIL - 130 - 2655	N26520	1 Set
Caliper Piston (Stainless Steel) 1.75" Dia.	WIL - 200 - 7528	N26521	Each

Parts Identification

Brake Wiring Diagram (N30114) - GBL12 and GBL12C

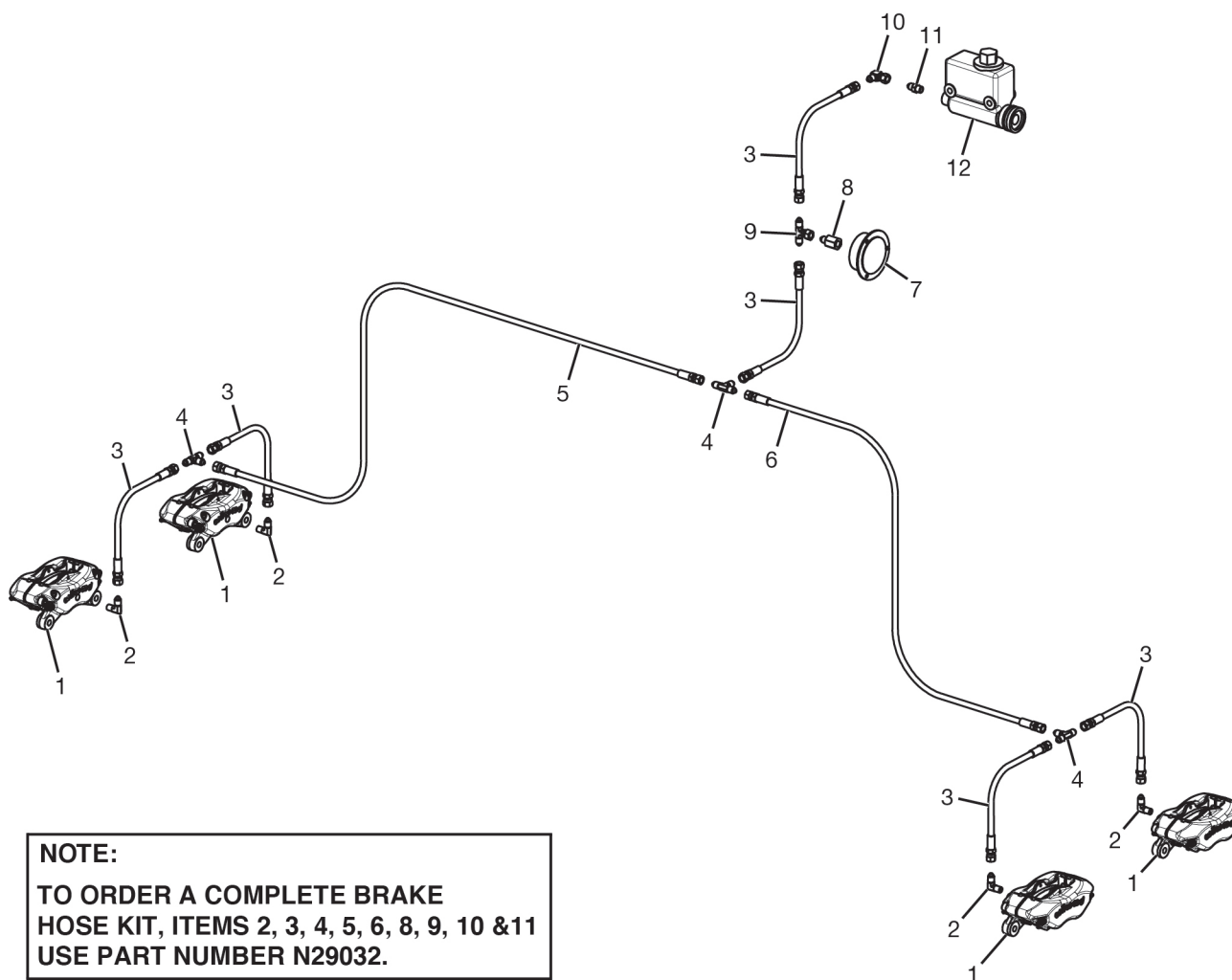


* Item 5 is a combined part.

NOTE:
TO ORDER A COMPLETE BRAKE WIRING KIT,
ITEMS 3, 4, 6 & 7 USE PART NUMBER N30133.

#	QTY.	PART #	DESCRIPTION
1	1	202846	AXLE, GBU12 LEFT WIRED
2	1	202847	AXLE, GBU12 RIGHT WIRED
3	2	N30083	WIRE, GBU12 LEFT BRAKE
4	1	N30091	HARNESS, GBU12 LIGHT & BRAKE
5	1	N30092	WIRE, BRAKE BATTERY
6	1	N30093	WIRE, BRAKE TWO TO THREE
7	1	N30116	WIRE, GBL12 BRAKE SPLITTER

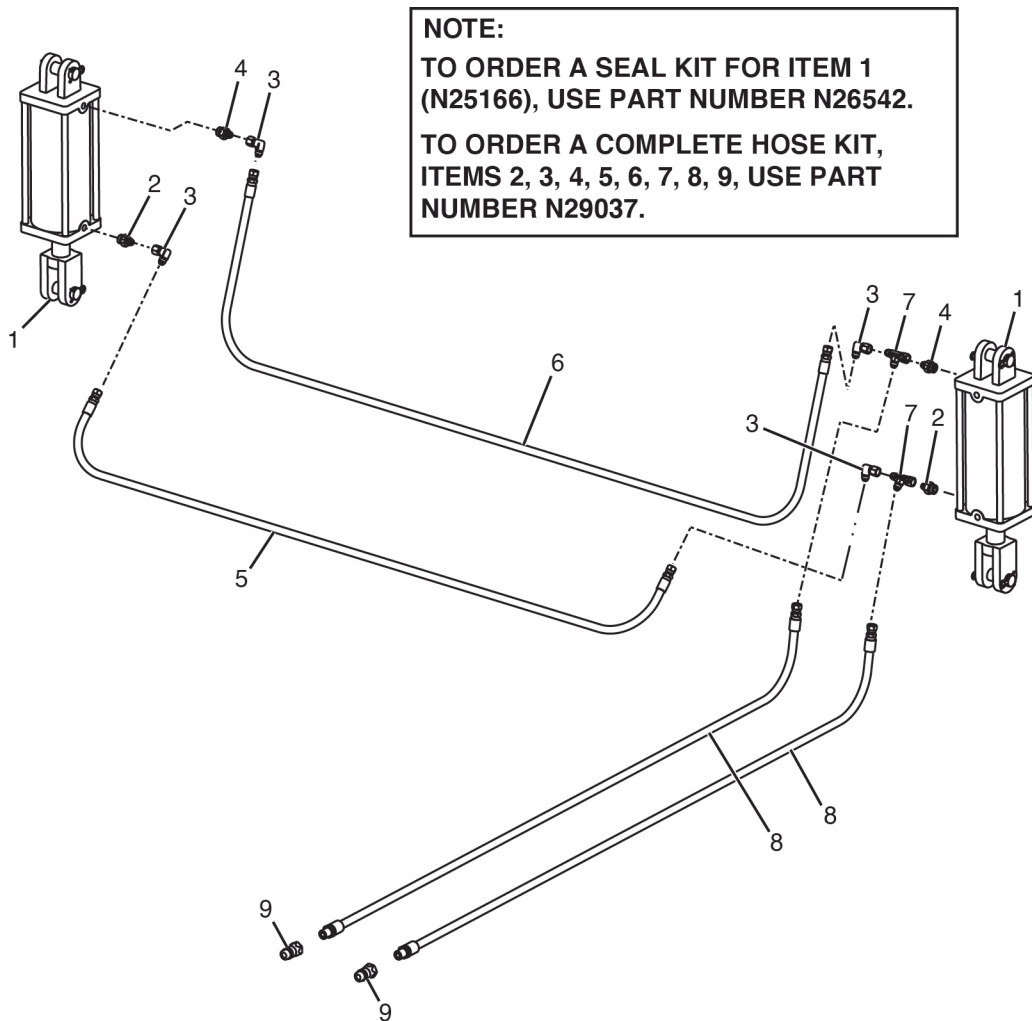
Brake Diagram (N29035) - GBL12 and GBL12C



#	QTY.	PART #	DESCRIPTION
1	4	N22794	CALIPER, WILWOOD BRAKE
2	4	N23939	ELBOW, 90 DEG - 4MJIC - 2NPT
3	6	N25220	HOSE, 1/8" BRAKE 15" - 4FJX
4	3	N23940	TEE, 4MJIC - 4MJIC - 4MJIC
5	1	N29034	HOSE, 1/8" x 210" - 4FJX - 4FJX
6	1	N29033	HOSE, 1/8" BRAKE 72" - 4FJX - 4FJX
7	1	N22377	GAUGE, 2000 PSI HYD PRESSURE
8	1	N25126	ADAPTER, 4MJIC - 4FP
9	1	N25186	TEE, 4MJIC - 4MJIC - 4FJIC BRANCH
10	1	N25125	ELBOW, 90 DEG - 4MJIC - 4MJIC
11	1	N25837	ADAPTER, 4MJIC - 2NPT
12	1	N27294	CYLINDER, BRAKE TITAN MASTER

Parts Identification

Hydraulic Lift Schematic (N29040) - GBL12 and GBL12C

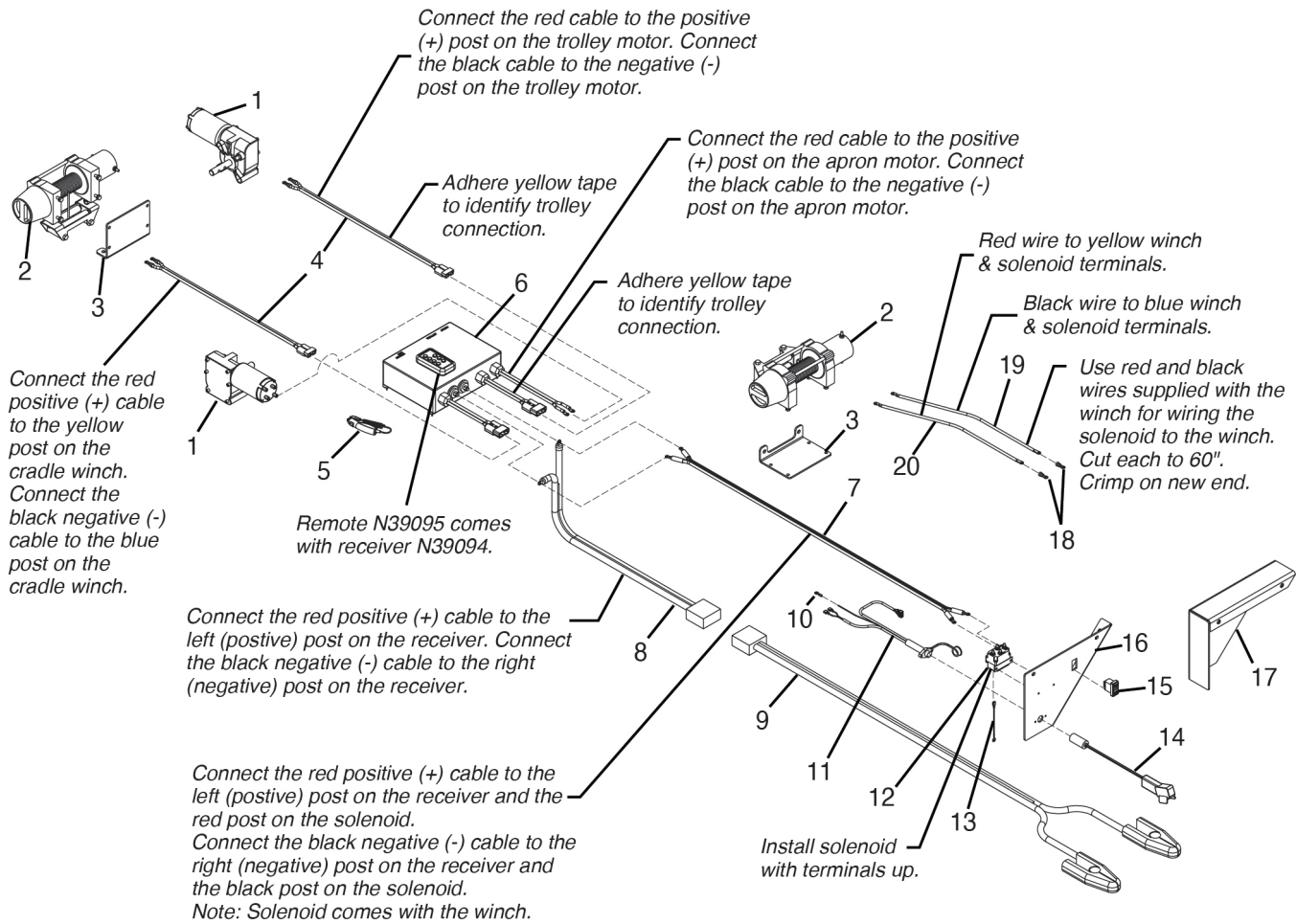


Hydraulic Lift Schematic (N29040) - GBL12 and GBL12C

#	QTY.	PART #	DESCRIPTION
1	2	N25166	CYLINDER, HYD 4" X 8" - 3000 PSI
2	2	N17022	ADAPTER, 6MJIC - 8MOR
3	4	N29078	ELBOW, 90 DEG - 6MJIC - 6FJIC
4	2	N25421	RESTRICTOR, 6MJIC - 8MOR - 0.062
5	1	N29039	HOSE, 3/8" X 80" - 6FJC - 6FJC
6	1	N33439	HOSE, 3/8" X 100" - 6FJC - 6FJC
7	2	N37279	TEE, -6MJIC 6FJIC -6MJIC
8	2	N29038	HOSE, 3/8" X 350" - 6FJC - 8MP
9	2	N11825	COUPLER, 1/2" MALE PIONEER

Parts Identification

Wiring Diagram (202635) - GBL12 and GBL12C



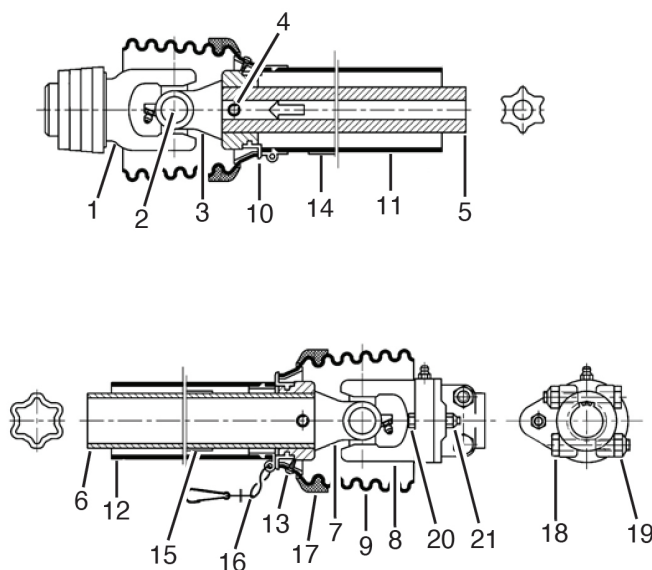
NOTE: Items 2, 7, 11, 12, 14, 15, 16, and 17 are not used on the GBL 12C model.

Wiring Diagram (202635) - GBL12 and GBL12C

#	QTY.	PART #	DESCRIPTION
1	2	N27660	MOTOR, ELECTRIC 1/2 HP
2	2	201933	WINCH, WARN VRX 45
3	2	N30172	MOUNT, WARN RT40 FAIRLEAD
4	2	N30833	CABLE, GBL10 6 GA WINCH IMP
5	1	N39055	CHARGER, CAR MICRO USB
6	1	N39094	RECEIVER, 3 CONTACT LOFTNESS
7	1	N157800	HARNESS, GBL12A SWG AUG WINCH
8	1	N26639	HARNESS, GBL12 MAIN POWER
9	1	N26638	HARNESS, GBL12 TRACTOR BATTERY
10	1	N26656	TERMINAL, 1/4" RING 16/14 AWG
11	1	201936	HARNESS, WARN REMOTE AND SWITCH
12	1	201934	SOLENOID, WARN VRX45
13	1	201938	WIRE, WARN VRX 45 SOL BROWN
14	1	N30853	REMOTE, WARN RT40 WIRED
15	1	201937	SWITCH, WARN VRX 45 ROCKER
16	1	202545	PLATE, GBL12 WINCH ELC MNT 2
17	1	N157132	COVER, GBL12 WINCH PANEL
18	2	N30835	TERMINAL, 6 GA 1/4" RING INS
19	1	201939	WIRE, WARN VRX 45 BLACK 8'
20	1	201940	WIRE, WARN VRX 45 RED 8'

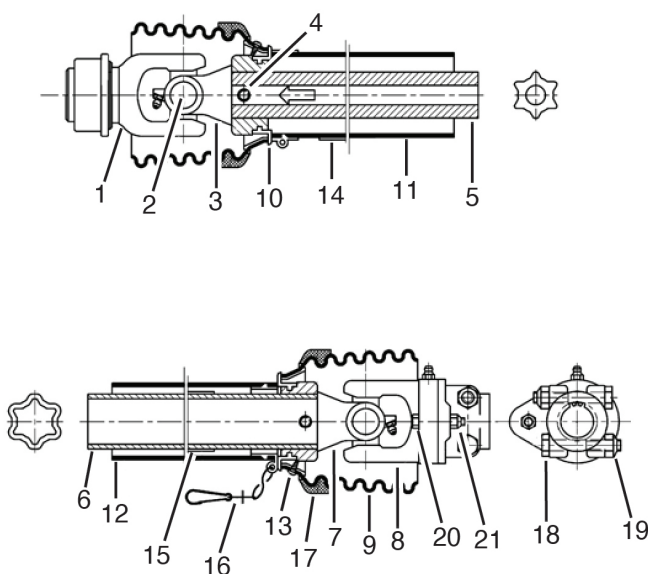
Parts Identification

PTO Driveline (N29020) - GBL12 only



#	QTY.	PART #	DESCRIPTION
1	1	N26772	YOKE, 1 - 3/8" - 21 SPL. ASGE
2	2	N23479	KIT, WALT PTO CROSS & BEARING
3	1	N23711	YOKE, WALT INBOARD S4
4	2	N23480	PIN, WALT PTO SPRING 10 x 80
5	1	N26773	SHAFT, INNER PROFILE S4
6	1	N26774	SHAFT, OUTER PROFILE S5
7	1	N23714	YOKE, WALT INBOARD S5
8	1	N26775	CLUTCH, SHEARBOLT
9	2	N23486	SHIELD, WALT CONE 6 RIB
10	2	N10348	RING, PTO BEARING SC 25 PL - TYPE
11	1	N26776	TUBE, GUARD OUTER
12	1	N26777	TUBE, GUARD INNER
13	3	N11750	SCREW, WALT PTO SHIELD
14	1	N10357	DECAL, PTO PT SHAFT GUARD
15	1	N11761	DECAL, WALT TUBE SHIELD - 383334
16	1	N10356	CHAIN, PTO SAFETY
17	2	N27146	COLLAR, WALT PTO RFCMNT
18	2	N26778	BOLT, M16 x 80 MM
19	1	4449	NUT, LOCK M16
*20	1	N23489	BOLT, WALT M8 x 60 GR 8.8
21	1	N23490	NUT, WALT M8
* THRU - BOLT FIELD SERVICEABLE WITH 5/16" x 2 - 1/2" GRADE 5 BOLT			

PTO Driveline (N29021) - GBL12 only

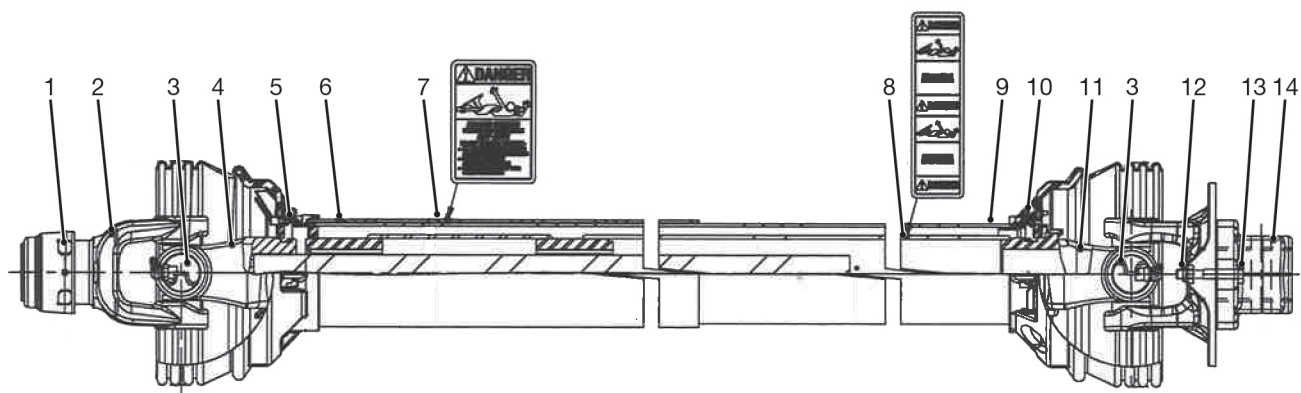


#	QTY.	PART #	DESCRIPTION
1	1	N26781	YOKE, 1 - 3/4" - 20 SPL. ASG
2	2	N23479	KIT, WALT PTO CROSS & BEARING
3	1	N23711	YOKE, WALT INBOARD S4
4	2	N23480	PIN, WALT PTO SPRING 10 x 80
5	1	N26773	SHAFT, INNER PROFILE S4
6	1	N26774	SHAFT, OUTER PROFILE S5
7	1	N23714	YOKE, WALT INBOARD S5
8	1	N26775	CLUTCH, SHEARBOLT
9	2	N23486	SHIELD, WALT CONE 6 RIB
10	2	N10348	RING, PTO BEARING SC 25 PL - TYPE
11	1	N26776	TUBE, GUARD OUTER
12	1	N26777	TUBE, GUARD INNER
13	3	N11750	SCREW, WALT PTO SHIELD
14	1	N10357	DECAL, PTO PT SHAFT GUARD
15	1	N11761	DECAL, WALT TUBE SHIELD - 383334
16	1	N10356	CHAIN, PTO SAFETY
17	2	N27146	COLLAR, WALT PTO RFCMNT
18	2	N26778	BOLT, M16 x 80 MM
19	1	4449	NUT, LOCK M16
*20	1	N23489	BOLT, WALT M8 x 60 GR 8.8
21	1	N23490	NUT, WALT M8

* THRU - BOLT FIELD SERVICEABLE WITH 5/16" x 2 - 1/2" GRADE 5 BOLT

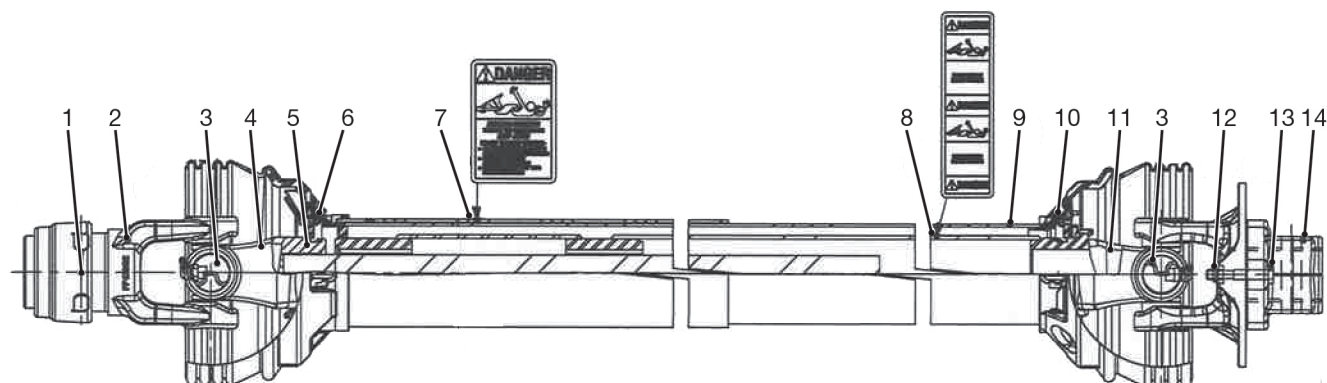
Parts Identification

PTO Driveline (N30626) - GBL12C only



#	QTY.	PART #	DESCRIPTION
1	1	8209-01	KIT, COLLAR AND PAWL
2	1	N35478	ASM, SAFE SLIDE LOCK YOKE
3	2	N35479	KIT, 35E SERIES CROSS REPAIR
4	1	N35480	SHAFT, 35E YOKE AND
5	1	N35481	KIT, NYLON REPAIR OUTER
6	1	N35482	GUARD, OUTER PLASTIC
7	1	8256-09	DECAL, 55R SAFETY OUTER
8	1	8256-10	DECAL, 55R PTO SAFETY INNER
9	1	N35483	GUARD, INNER PLASTIC
10	1	N35484	KIT, NYLON REPAIR INNER
11	1	N35485	YOKE, TUBE & SLIP SLEEVE
12	1	4051	NUT, LOCK 5/16"
13	1	4227	BOLT, 5/16" X 2" GR 5
14	1	N35486	ASM, BALL SHEAR

PTO Driveline (N30627) - GBL12C only



#	QTY.	PART #	DESCRIPTION
1	1	8624-01	KIT, SLIDE LOCK REPAIR 1-3/4"
2	1	N35488	ASM, SAFE SLIDE LOCK YOKE
3	2	N35479	KIT, 35E SERIES CROSS REPAIR
4	1	N35480	SHAFT, 35E YOKE AND
5	1	N35481	KIT, NYLON REPAIR OUTER
6	1	N35482	GUARD, OUTER PLASTIC
7	1	8256-09	DECAL, 55R SAFETY OUTER
8	1	8256-10	DECAL, 55R PTO SAFETY INNER
9	1	N35483	GUARD, INNER PLASTIC
10	1	N35484	KIT, NYLON REPAIR INNER
11	1	N35485	YOKE, TUBE & SLIP SLEEVE
12	1	4051	NUT, LOCK 5/16"
13	1	4227	BOLT, 5/16" X 2" GR 5
14	1	N35486	ASM, BALL SHEAR



Specifications - GBL12

DESCRIPTION	GRAIN BAG LOADER (GBL12)
Operating Capacity	500 Bushels/Min
Operating Weight	13,020 LB.
Minimum Tractor Horsepower	120 HP
Maximum Rear-PTO RPM	1000 RPM
Hydraulic Flow	6 GPM
Main Discharge Auger	20"
Main Auger Drive	1 - 3/4 - 20 Spline
Wheels	15L - 19.5 Suregrip Traction
PTO Driveline	Walterscheid W2400
Brakes	Dual Disc Brakes
Transport Wheels	235/75R - 17.5 HWY
Transport Wheel Cylinders	4" x 8"
Hopper Size	8' x 15'
Operating Height	153" (12' 9")
Operating Width	236" (19' 8")
Operating Length	390" (32' 6")

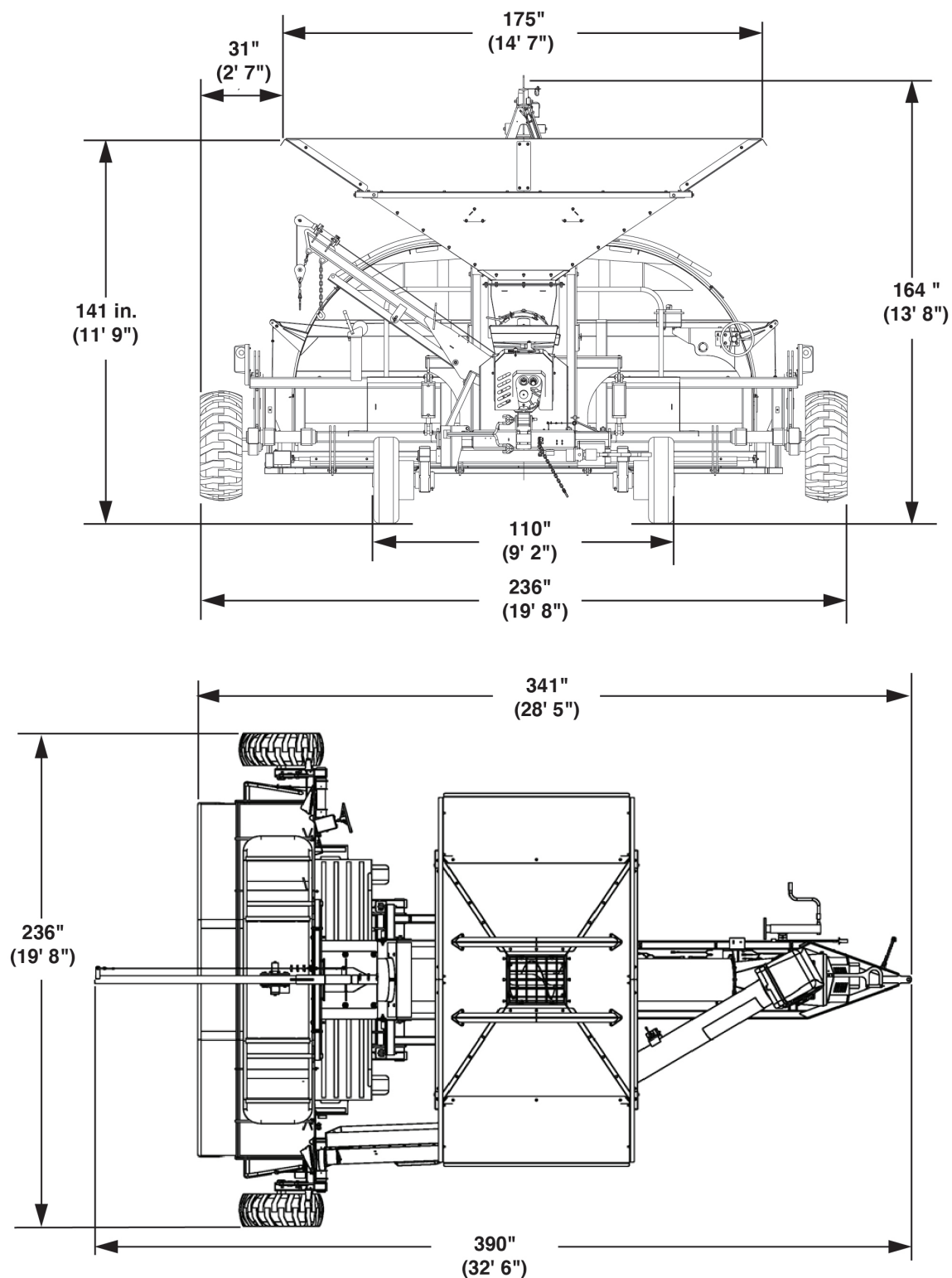
Specifications - GBL12C

DESCRIPTION	GRAIN BAG LOADER (GBL12C)
Operating Capacity	500 Bushels/Min
Operating Weight	12,627 LB.
Minimum Tractor Horsepower	120 HP
Maximum Rear-PTO RPM	1000 RPM
Hydraulic Flow	6 GPM
Main Discharge Auger	20"
Main Auger Drive	1 - 3/4 - 20 Spline
Wheels	15L - 19.5 Suregrip Traction
PTO Driveline	Walterscheid W2400
Brakes	Dual Disc Brakes
Transport Wheels	235/75R - 17.5 HWY
Transport Wheel Cylinders	4" x 8"
Hopper Size	8' x 15'
Operating Height	153" (12' 9")
Operating Width	236" (19' 8")
Operating Length	291" (24' 3")

Appendix

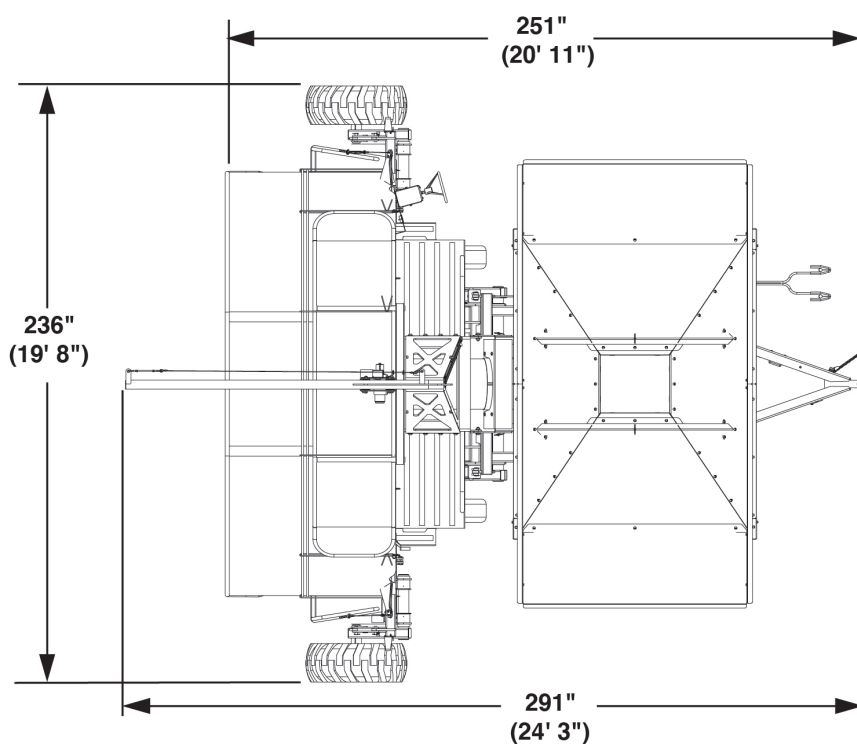
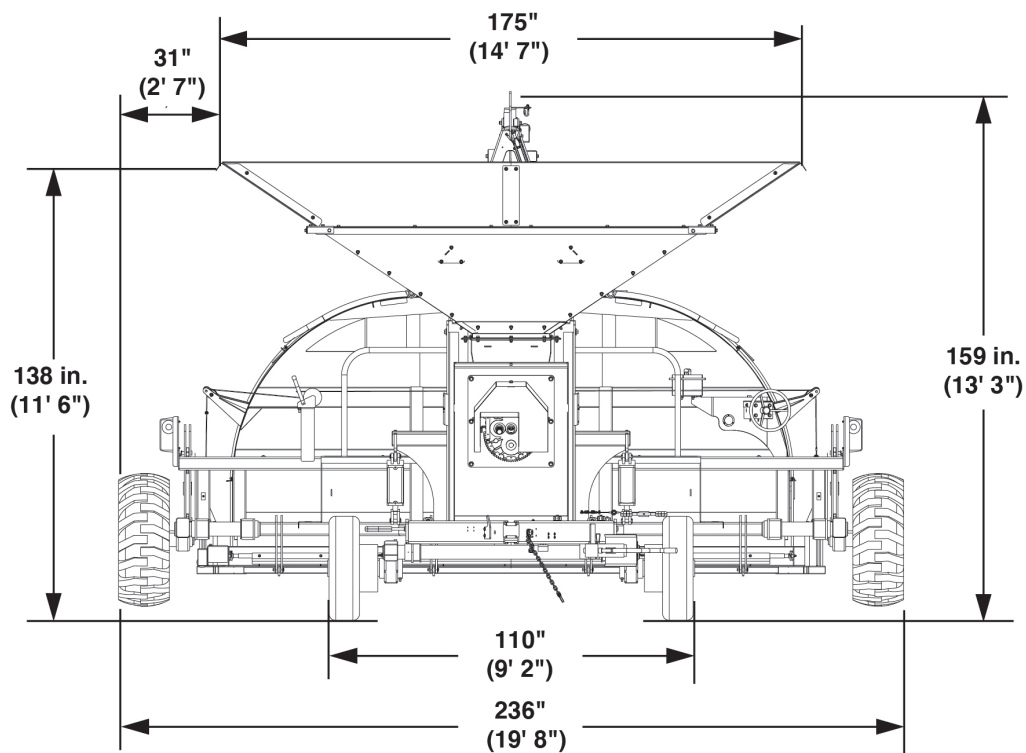
Dimensions - GBL12

Transportation



Dimensions - GBL12C

Transportation



Appendix

Dimensions (Cont'd)

DESCRIPTION	GBL12 (W/SWING AUGER)
Operating Height	153 in. (12' 9") - (388.6 cm) - Varies
Operating Width	340 in. (28' 4") - (863.6 cm)
Operating Length	390 in. (32' 6") - (990.6 cm)
Transport Height	153 in. (12' 9") - (388.6 cm)
Transport Width	236 in. (19' 8") - (599.4 cm)
Transport Length	390 in. (32' 6") - (990.6 cm)

DESCRIPTION	GBL12C
Operating Height	153 in. (12' 9") - (388.6 cm) - Varies
Operating Width	236 in. (19' 8") - (599.4 cm)
Operating Length	291 in. (24' 3") - (739.1 cm)
Transport Height	159 in. (13' 3") - (403.9 cm)
Transport Width	236 in. (19' 8") - (599.4 cm)
Transport Length	291 in. (24' 3") - (739.1 cm)

Torque Specifications

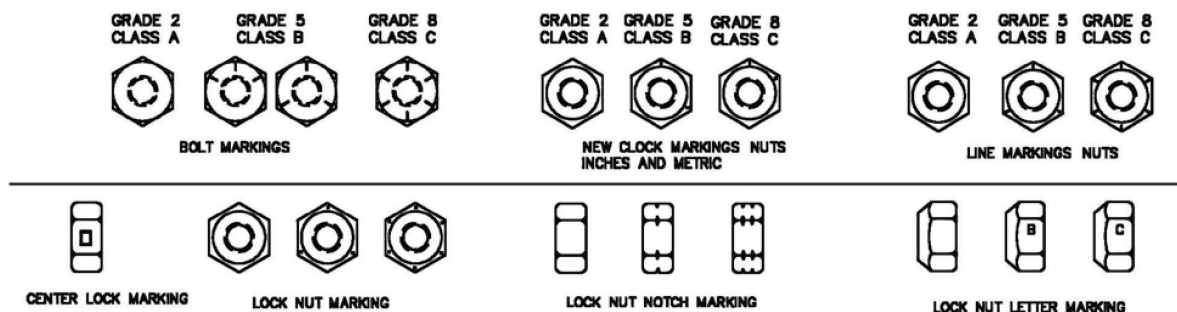
Inches Hardware and Lock Nuts

TORQUE CHARTS

Minimum Hardware Tightening Torques

Normal Assembly Applications
(Standard Hardware and Lock Nuts)

SAE Gr. 2	SAE Grade 5		SAE Grade 8		LOCK NUTS			
Nominal Size	Unplated or Plated Silver	Plated W / ZnCr Gold	Unplated or Plated Silver	Plated W / ZnCr Gold	Unplated or Plated Silver	Plated W / ZnCr Gold	Grade W / Gr. 5 Bolt	Grade W / Gr. 8 Bolt
1/4	55 in.-lb. (6.2 N•m)	72 in.-lb. (8.1 N•m)	86 in.-lb. (9.7 N•m)	112 in.-lb. (12.6 N•m)	121 in.-lb. (13.6 N•m)	157 in.-lb. (17.7 N•m)	61 in.-lb. (6.9 N•m)	86 in.-lb. (9.8 N•m)
5/16	115 in.-lb. (13 N•m)	149 in.-lb. (17 N•m)	178 in.-lb. (20 N•m)	229 in.-lb. (26 N•m)	250 in.-lb. (28 N•m)	324 in.-lb. (37 N•m)	125 in.-lb. (14 N•m)	176 in.-lb. (20 N•m)
3/8	17 ft.-lb. (23 N•m)	22 ft.-lb. (30 N•m)	26 ft.-lb. (35 N•m)	34 ft.-lb. (46 N•m)	37 ft.-lb. (50 N•m)	48 ft.-lb. (65 N•m)	19 ft.-lb. (26 N•m)	26 ft.-lb. (35 N•m)
7/16	27 ft.-lb. (37 N•m)	35 ft.-lb. (47 N•m)	42 ft.-lb. (57 N•m)	54 ft.-lb. (73 N•m)	59 ft.-lb. (80 N•m)	77 ft.-lb. (104 N•m)	30 ft.-lb. (41 N•m)	42 ft.-lb. (57 N•m)
1/2	42 ft.-lb. (57 N•m)	54 ft.-lb. (73 N•m)	64 ft.-lb. (87 N•m)	83 ft.-lb. (113 N•m)	91 ft.-lb. (123 N•m)	117 ft.-lb. (159 N•m)	45 ft.-lb. (61 N•m)	64 ft.-lb. (88 N•m)
9/16	60 ft.-lb. (81 N•m)	77 ft.-lb. (104 N•m)	92 ft.-lb. (125 N•m)	120 ft.-lb. (163 N•m)	130 ft.-lb. (176 N•m)	169 ft.-lb. (229 N•m)	65 ft.-lb. (88 N•m)	92 ft.-lb. (125 N•m)
5/8	83 ft.-lb. (112 N•m)	107 ft.-lb. (145 N•m)	128 ft.-lb. (174 N•m)	165 ft.-lb. (224 N•m)	180 ft.-lb. (244 N•m)	233 ft.-lb. (316 N•m)	90 ft.-lb. (122 N•m)	127 ft.-lb. (172 N•m)
3/4	146 ft.-lb. (198 N•m)	189 ft.-lb. (256 N•m)	226 ft.-lb. (306 N•m)	293 ft.-lb. (397 N•m)	319 ft.-lb. (432 N•m)	413 ft.-lb. (560 N•m)	160 ft.-lb. (217 N•m)	226 ft.-lb. (306 N•m)
7/8	142 ft.-lb. (193 N•m)	183 ft.-lb. (248 N•m)	365 ft.-lb. (495 N•m)	473 ft.-lb. (641 N•m)	515 ft.-lb. (698 N•m)	667 ft.-lb. (904 N•m)	258 ft.-lb. (350 N•m)	364 ft.-lb. (494 N•m)
1	213 ft.-lb. (289 N•m)	275 ft.-lb. (373 N•m)	547 ft.-lb. (742 N•m)	708 ft.-lb. (960 N•m)	773 ft.-lb. (1048 N•m)	1000 ft.-lb. (1356 N•m)	386 ft.-lb. (523 N•m)	545 ft.-lb. (739 N•m)



Appendix

Torque Specifications (Cont'd)

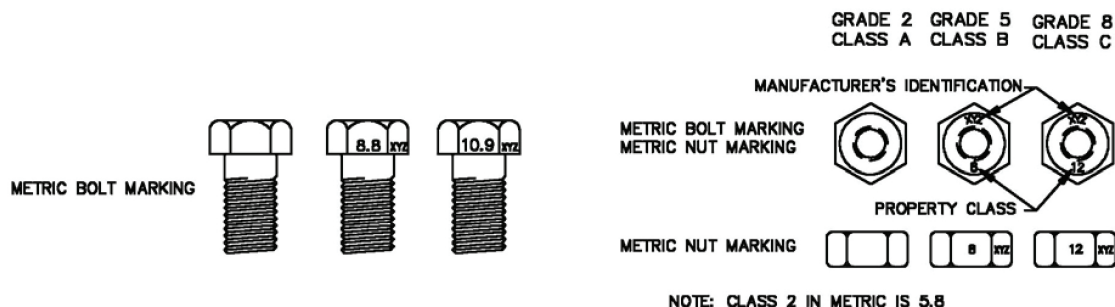
Metric Hardware and Lock Nuts

TORQUE CHARTS

Minimum Hardware Tightening Torques

Normal Assembly Applications
(Metric Hardware and Lock Nuts)

	Class 5,8		Class 8,8		Class 10,9		Lock nuts
Nominal Size	Unplated or Plated Silver	Plated W / ZnCr Gold	Unplated or Plated Silver	Plated W / ZnCr Gold	Unplated or Plated Silver	Plated W / ZnCr Gold	Class 8 W / CL. 8,8 Bolt
M4	1.7 N•m (15 in.-lb.)	2.2 N•m (19 in.-lb.)	2.6 N•m (23 in.-lb.)	3.4 N•m (30 in.-lb.)	3.7 N•m (33 in.-lb.)	4.8 N•m (42 in.-lb.)	1.8 N•m (16 in.-lb.)
M6	5.8 N•m (51 in.-lb.)	7.6 N•m (67 in.-lb.)	8.9 N•m (79 in.-lb.)	12 N•m (102 in.-lb.)	13 N•m (115 in.-lb.)	17 N•m (150 in.-lb.)	6.3 N•m (56 in.-lb.)
M8	14 N•m (124 in.-lb.)	18 N•m (159 in.-lb.)	22 N•m (195 in.-lb.)	28 N•m (248 in.-lb.)	31 N•m (274 in.-lb.)	40 N•m (354 in.-lb.)	15 N•m (133 in.-lb.)
M10	28 N•m (21 ft.-lb.)	36 N•m (27 ft.-lb.)	43 N•m (32 ft.-lb.)	56 N•m (41 ft.-lb.)	61 N•m (45 ft.-lb.)	79 N•m (58 ft.-lb.)	30 N•m (22 ft.-lb.)
M12	49 N•m (36 ft.-lb.)	63 N•m (46 ft.-lb.)	75 N•m (55 ft.-lb.)	97 N•m (72 ft.-lb.)	107 N•m (79 ft.-lb.)	138 N•m (102 ft.-lb.)	53 N•m (39 ft.-lb.)
M16	121 N•m (89 ft.-lb.)	158 N•m (117 ft.-lb.)	186 N•m (137 ft.-lb.)	240 N•m (177 ft.-lb.)	266 N•m (196 ft.-lb.)	344 N•m (254 ft.-lb.)	131 N•m (97 ft.-lb.)
M20	237 N•m (175 ft.-lb.)	307 N•m (226 ft.-lb.)	375 N•m (277 ft.-lb.)	485 N•m (358 ft.-lb.)	519 N•m (383 ft.-lb.)	671 N•m (495 ft.-lb.)	265 N•m (195 ft.-lb.)
M24	411 N•m (303 ft.-lb.)	531 N•m (392 ft.-lb.)	648 N•m (478 ft.-lb.)	839 N•m (619 ft.-lb.)	897 N•m (662 ft.-lb.)	1160 N•m (855 ft.-lb.)	458 N•m (338 ft.-lb.)





www.loftness.com

Loftness Specialized Equipment, Inc.
650 So. Main Street • PO Box 337 • Hector, MN 55342
Tel: 320.848.6266 • Fax: 320.848.6269 • Toll Free: 1.800.828.7624

Printed in USA
© Loftness 2025