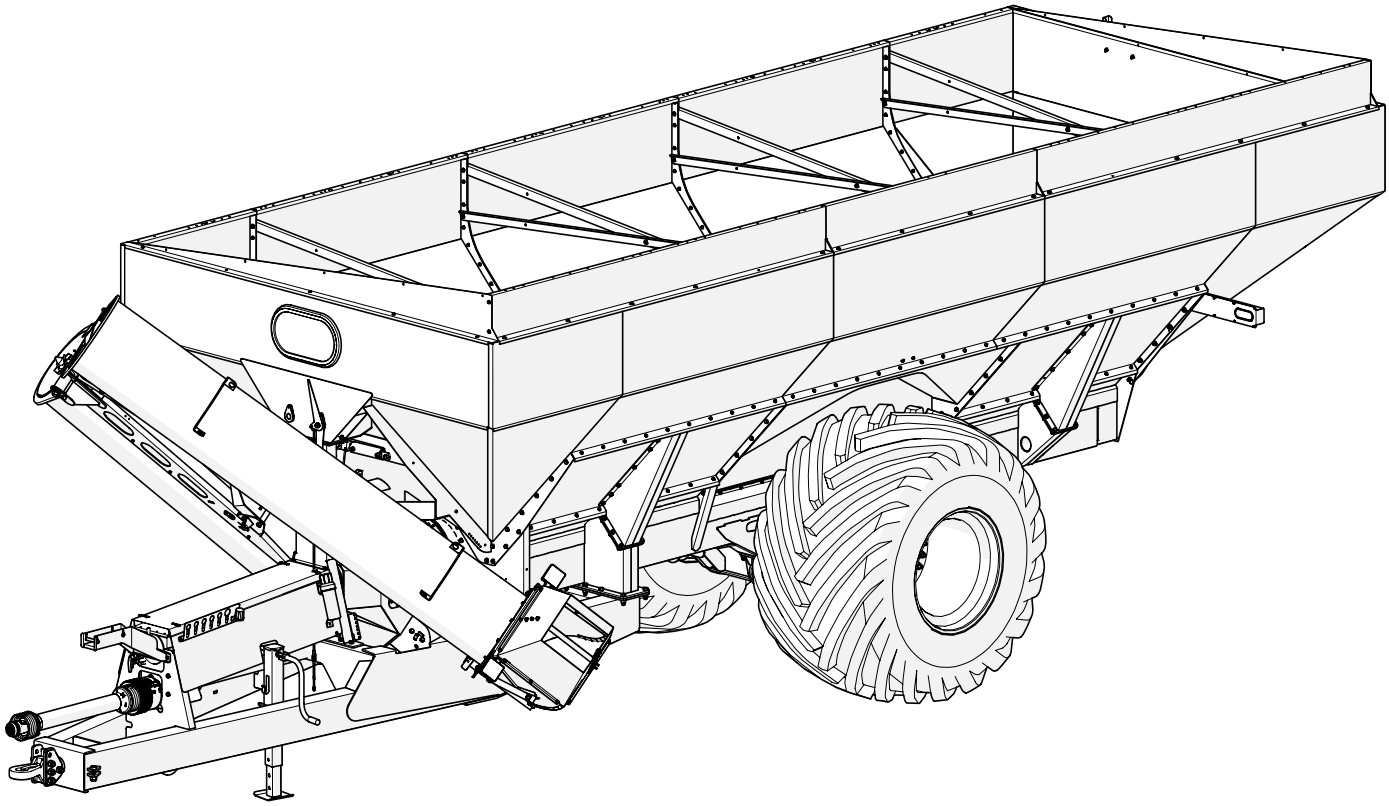
DEMCO

Doing Our Best to Provide You the Best

AG20056, Rev 2
10/26

GRAIN CART

1100, 1300, 1500, 1700, & 2200 DUAL AUGER



OPERATOR MANUAL

INTRODUCTION

Thank you for purchasing a Grain Cart. We feel you have made a wise choice and hope you are completely satisfied with your new piece of equipment. Proper care and use will result in many years of service.

WARRANTY POLICY, OPERATOR MANUALS, PARTS MANUALS & REGISTRATION

Go online to www.demco-products.com to review Demco warranty policies, operator manuals and register your Demco product.

SERIAL NUMBER

This manual is for serial numbers...

WARNING: TO AVOID PERSONAL INJURY OR DEATH, OBSERVE FOLLOWING INSTRUCTIONS:

Ensure that anybody present is clear before applying power to any machinery used in conjunction with grain cart or when moving grain cart.

Never allow anyone in, near, or on grain cart during transporting or unloading of grain. Moving grain is dangerous and can cause entrapment, resulting in severe injury or death by suffocation.

Do not exceed 20 miles per hour when towing grain cart.

GENERAL INFORMATION

1. Unless otherwise specified, high-strength (grade5) (3 radial-line head markings) hex head bolts are used throughout assembly of this piece of equipment.
2. Whenever terms **"LEFT"** and **"RIGHT"** are used in this manual it means from a position behind wagon box and facing forward.
3. When placing a parts order, refer to the **Parts Manual** for proper part numbers.
4. Read assembly instructions carefully. Study assembly procedures and all illustrations before you begin assembly. Note which parts are used in each step. This unit must be assembled in proper sequence or complications will result.

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TAKE NOTE! THIS SAFETY ALERT SYMBOL FOUND THROUGHOUT THIS MANUAL IS USED TO CALL YOUR ATTENTION TO INSTRUCTIONS INVOLVING YOUR PERSONAL SAFETY AND SAFETY OF OTHERS. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN INJURY OR DEATH!



THIS SYMBOL MEANS

ATTENTION

BECOME ALERT

YOUR SAFETY IS INVOLVED!

SIGNAL WORDS:

This manual uses the following signal words--**DANGER**, **WARNING**, and **CAUTION**-- with safety messages. The appropriate signal word has been selected using the following guidelines.

DANGER:

Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. This signal word is to be limited to most extreme situations typically for machine components which, for functional purposes, cannot be guarded.

WARNING:

Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

CAUTION:

Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

If you have questions not answered in this manual, require additional copies, or if your manual is damaged, please contact your dealer or DEMCO, 4010 320th Street, Boyden, IA 51234
ph: (712) 725-2311 or Toll Free: 1-800-543-3626 Fax: (712) 725-2380 or 1-800-845-6420
http://www.demco-products.com

SAFETY...YOU CAN LIVE WITH IT

EQUIPMENT SAFETY GUIDELINES

Every year many accidents occur which could have been avoided by a few seconds of thought and a more careful approach to handling equipment. You, the operator, can avoid many accidents by observing the following precautions in this section. To avoid personal injury, study the following precautions and insist those working with you, or you yourself, follow them.

In order to provide a better view, certain illustrations in your owners manual may show an assembly with a safety shield removed. However, equipment should never be operated in this condition. Keep all shields in place. If shield removal becomes necessary for repairs, replace shield prior to use.

Replace any caution, warning, danger or instruction safety decal that is not readable or is missing.

Do not attempt to operate this equipment under the influence of alcohol or drugs.

Review safety instructions with all users annually.

Operator should be a responsible adult. **DO NOT ALLOW PERSONS TO OPERATE OR ASSEMBLE THIS UNIT UNTIL THEY HAVE DEVELOPED A THOROUGH UNDERSTANDING OF SAFETY PRECAUTIONS AND HOW IT WORKS.**

To prevent injury or death, use a tractor equipped with a roll over protective system (ROPS). Do not paint over, remove, or deface any safety signs or warning decals on your equipment. Observe all safety signs and practice instructions on them.

Never exceed limits of a piece of machinery. If its ability to do a job, or to do so safely is in question **DON'T TRY IT**.

LIGHTING AND MARKING

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

Lighting kits are available from your dealer or from manufacturer.

SAFETY SIGN CARE

- Keep safety signs clean and legible at all times.
- Replace safety signs that are missing or have become illegible.
- Replacement parts that displayed a safety sign should also display current sign.
- Safety signs are available from your distributor, dealer parts department, or factory.

How to install safety signs:

- Be sure that installation area is clean and dry.
- Decide on exact position before you remove backing paper.
- Remove smallest portion of split backing paper.
- Align decal over specified area and carefully press small portion with exposed sticky backing in place.
- Slowly peel back remaining paper and carefully smooth remaining portion of decal into place.
- Small air pockets can be pierced with a pin and smoothed out using piece of decal backing paper.

TIRE SAFETY

- Failure to follow proper procedures when mounting a tire on a rim can produce an explosion which may result in a serious injury or death.
- Do not attempt to mount a tire unless you have proper equipment and experience to do job.
- Inflating or servicing tires can be dangerous. Whenever possible, trained personnel should be called to service and/or mount tires.
- Always order and install tires and wheels with appropriate type and load capacity to meet or exceed anticipated weight to be placed on the equipment.
- Refer to **"TIRE INFLATION CHART"** in your owners manual for maximum tire pressure for a Demco Grain Cart.

REMEMBER

Your best assurance against accidents is a careful and responsible operator. If there is any portion of this manual or function you do not understand, contact your local authorized dealer or manufacturer.

BEFORE OPERATION:

- Carefully study and understand this manual and the Owner's Manual.
- Do not wear loose-fitting clothing which may catch in moving parts.
- Always wear protective clothing and substantial shoes.
- It is recommended that suitable protective hearing and eye protection be worn.
- Operator may come in contact with certain materials which may require specific safety equipment relative to handling of such materials. (Examples: extreme dust, molds, fungus, bulk fertilizers, etc.)
- Keep wheel and lug nuts tightened to specified torque.
- Assure that agricultural implement tires are inflated evenly.
- Give unit a visual inspection for any loose bolts, worn parts, or cracked welds, and make necessary repairs. Follow maintenance safety instructions included in this manual.
- Be sure there are no tools lying on or in equipment.
- Do not use unit until you are sure that area is clear, especially around children and animals.
- Don't hurry learning process or take unit for granted. Ease into it and become familiar with your new equipment.
- Practice operation of your equipment and its attachments. Completely familiarize yourself and other operators with its operation before using.
- Make sure that brakes are evenly adjusted (if equipped with brakes).
- Use a tractor equipped with Roll Over Protection System (ROPS) and fasten your seatbelt prior to starting the engine.
- Manufacturer does not recommend usage of a tractor with the ROPS removed.
- Move tractor wheels to widest recommended settings to increase stability.
- Do not allow anyone to stand between tongue or hitch and towing vehicle when backing up to equipment.

DURING OPERATION

- Beware of bystanders, **PARTICULARLY CHILDREN!** Always look around to make sure that it is safe to start engine of towing vehicle or move unit. This is particularly important with higher noise levels and quiet cabs, as you may not hear people shouting.
- **NO PASSENGERS ALLOWED** - Do not carry passengers anywhere on or in tractor or equipment.
- Keep hands and clothing clear of moving parts.
- Do not clean, lubricate, or adjust your equipment while it is moving.

- When halting operation, even periodically, set tractor or towing vehicles brakes, disengage PTO, shut off engine, and **remove ignition key**.
- Be especially observant of operating area and terrain. Watch for holes, rocks, or other hidden hazards. Always inspect area prior to operation.
  - DO NOT operate near edge of drop-off or banks.
  - DO NOT operate on steep slopes as overturn may result.
  - Operate up and down (not across) intermediate slopes. Avoid sudden starts and stops.
- Pick the most level possible route when transporting across fields. Avoid edges of ditches, gullies, and steep hillsides.
- Be extra careful when working on inclines.
- Maneuver tractor or towing vehicle at safe speeds.
- Avoid overhead wires or other obstacles. Contact with overhead lines could cause serious injury or death.
- Avoid loose gravel, rocks, and holes; they can be dangerous for equipment operation or movement.
- Allow for unit length when making turns.
- Do not walk or work under raised components or attachments unless securely positioned and blocked.
- Keep all bystanders, pets, and livestock clear of work area.
- Operate towing vehicle from operators seat only.
- Never stand alongside of unit with engine running or attempt to start engine and/or operate machine while standing alongside of unit.
- Never leave running equipment unattended.
- As a precaution, always recheck hardware on equipment following every 100 hours of operation. Correct all problems. Follow maintenance safety procedures.

FOLLOWING OPERATION

- Following operation, or when unhitching, stop tractor or towing vehicle, set brakes, shut off engine and **remove ignition key**.
- Store unit in an area away from human activity.
- Do not park equipment where it will be exposed to livestock for long periods of time. Damage and livestock injury could result.
- Do not permit children to play on or around stored unit.
- Make sure all parked machines are on a hard, level surface and engage all safety devices.
- Wheel chocks may be needed to prevent unit from rolling.

HIGHWAY AND TRANSPORT OPERATIONS

- **SAFETY CHAINS:** If equipment is going to be transported on a public highway, always follow state and local regulations regarding safety chains and auxiliary lighting. Be sure to check with local law enforcement agencies for your own particular regulations. Only safety chains (not elastic or nylon/plastic tow straps) should be used to retain connection between towing and towed machines in event of separation of primary attaching system. Use a high strength, appropriately sized hitch pin with a mechanical retainer and attach safety chains. Criss cross chains under tongue and secure to draw bar cage, mounting loops, or bumper frame.

- Adopt safe driving practices:

  - Keep brake pedals latched together at all times. **NEVER USE INDEPENDENT BRAKING WITH MACHINE IN TOW, LOSS OF CONTROL AND/OR UPSET OF UNIT CAN RESULT**.

  - Always drive at a safe speed relative to local conditions, ensure that your speed is low enough for an emergency stop. Keep speed to a minimum.

  - Reduce speed prior to turns to avoid risk of overturning.

  - Always keep tractor or towing vehicle in gear to provide engine braking when going downhill. Do not coast.

  - Do not drink and drive!

- Comply with state and local laws governing highway safety and movement of farm machinery on public roads.

- Use approved accessory lighting, flags and necessary warning devices to protect yourself and operators of other vehicles on highway during transport. Various safety lights and devices are available from your dealer.

- Use of flashing amber lights is acceptable in most localities. However, some localities prohibit their use. Local laws should be checked for all highway lighting and marking requirements.

- When driving tractor and equipment on road under 20 m.p.h. (40 kph) at night or during day, use flashing amber warning lights and a slow moving vehicle (SMV) identification emblem.

- Plan your route to avoid heavy traffic.

- Be a safe and courteous driver. Always yield to oncoming traffic in all situations, including narrow bridges, intersections, etc.

- Be observant of bridge load ratings. Do not cross bridges rated lower than gross weight a which you are operating.

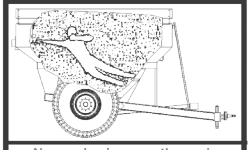
- Watch for obstructions overhead and side to side while transporting.

- Always operate equipment in a position to provide maximum visibility. Make allowances for increased length and weight of equipment when making turns, stopping unit, etc.

PERFORMING MAINTENANCE

- Good maintenance is your responsibility. Poor maintenance is an invitation to trouble.
- Make sure there is plenty of ventilation. Never operate engine of towing vehicle in a closed building. Exhaust fumes may cause asphyxiation.
- Before working on this machine, stop towing vehicle, set brakes, shut off engine and **remove ignition key**.
- Always use safety support and block wheels. Never use a jack to support machine.
- Always use proper tools or equipment for job at hand.
- Use extreme caution when making adjustments.
- Follow torque chart in owners manual when tightening bolts and nuts.
- Never use your hands to locate a hydraulic leak on attachments. Use a small piece of cardboard or wood. Hydraulic fluid escaping under pressure can penetrate skin.
- Openings in skin and minor cuts are susceptible to infection from hydraulic fluid. **Without immediate medical treatment, serious infection and reactions can occur.**
- When disconnecting hydraulic lines, shut off hydraulic supply and relieve all hydraulic pressure.
- Replace **all shields** and **guards** after servicing and before moving.
- After servicing, be sure all tools, parts and service equipment are removed.
- Do not allow grease or oil to build up on any steps or platform.
- When replacing bolts, refer to owners manual.
- Refer to bolt torque chart in owners manual for head identification marking.
- Where replacement parts are necessary for periodic maintenance and servicing, genuine factory replacement parts must be used to restore your equipment to original specifications. Manufacturer will not claim responsibility for use of unapproved parts or accessories and other damages as a result of their use.
- If equipment has been altered in any way from original design, manufacturer does not accept any liability for injury or warranty.
- A fire extinguisher and first aid kit should be kept readily accessible while performing maintenance on this equipment.

DANGER
To prevent serious injury or death by suffocation!



- Never play in or on the grain.
- Flowing grain traps and suffocates victim in seconds!

Farm Safety Just Kids

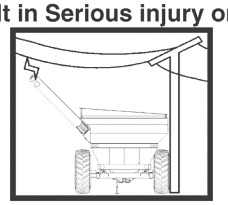
WARNING
Improper use may cause serious injury or death!



Keep off ladder while machine is being moved or in operation

WARNING
To prevent serious injury or death.
- Read operators manual before using machine.
- Keep all shields in place.
- Disengage power take off and shut off engine before servicing, cleaning or clearing a clogged machine.
- Keep hands, feet and clothing away from all moving parts.
- Do not stand or climb on machine when operating.
- No riders shall be allowed on this equipment at any time.

DANGER
Contact with electric lines will result in Serious injury or death.



Use care when moving or operating this machine near electric lines.
Electrocution can occur without direct contact.



WARNING
To prevent serious injury or death
- Stay clear of hydraulic oil under pressure.
- Relieve pressure before removing hose, valves or servicing the hydraulic system.



WARNING
To prevent serious injury or death
- Do not operate or work on this machine with out reading and understanding the operator's manual.
- If manual is lost, contact your nearest dealer for a new manual.
- Avoid unsafe operation or maintenance.

IMPORTANT
Local & State weight restrictions & regulations may affect use of this equipment on public roads and highways.

WARNING
To prevent serious injury or death, keep hands and clothing away from moving parts

PINCH POINT



WARNING
- Failure to follow this warning could result in serious injury or death from pinching.
- Keep all persons and objects clear while any part of this machine is in motion.

#1

CAUTION
Always tighten lug nuts to recommended torque in a star pattern.

After lug nuts are tightened to recommended torque re-torque all lug nuts every loaded mile until lug nuts retain proper torque.

After lug nuts have retained proper torque check daily.

Failure to follow this procedure will void any and all warranty of wheel and hub from damage caused by loose lug nuts.

Torque 3/4 in. lug nuts to 400 Ft. lbs.

Torque 1 in. lug nuts to 970 Ft. lbs.

WARNING
To avoid excessive wear to clevis when using as a Pintle Ring always rotate clevis 180% before using.

Always return clevis to the upright position before using as a clevis.

Failure to follow this procedure will void any and all warranty of clevis and clevis receiver.

CAUTION!
Do not exceed 20 MPH
Do not tow grain cart with auger folded out or structural damage may occur.

DANGER
Contact with auger will cause serious injury or death!



Keep hands and clothing away from moving parts.

#2

DANGER
Contact with Rotating Driveline will cause serious injury or death.



Do not operate without
- All driveline guards, tractor and equipment shields in place.
- Drivelines securely attached at both ends.
- Driveline guards that turn freely on driveline.

#3

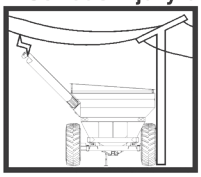
DANGER
Contact with auger will cause serious injury or death!



- Do not enter grain tank when auger is running.
- Disengage power take off and shut off engine before servicing, cleaning or clearing a clogged machine.

#4

DANGER
Contact with electric lines will result in Serious injury or death.



Use care when moving or operating this machine near electric lines.
Electrocution can occur without direct contact.

#5

PINCH POINT



WARNING
- Failure to follow this warning could result in serious injury or death from pinching.
- Keep all persons and objects clear while any part of this machine is in motion.

#6

WARNING
Improper use may cause serious injury or death



Keep all persons and objects clear while any part of this machine is in motion

REV 2 AG21180

#7

CAUTION
To avoid injury or property damage

Do not use jack when equipment is loaded.

REV 1 AB21026

#8

PINCH POINTS



REV 1 AB21027

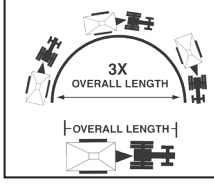
#9

CAUTION
CHECK ALL LUG NUTS
DEALER OR MANUFACTURER ARE NOT RESPONSIBLE FOR DAMAGE CAUSED BY LOOSE LUG NUTS.

Rev 1 AG21127

#10

WARNING
WIDER TURNS INCREASE TRACK LIFE



FOR INCREASED LIFE OF THE TRACK SYSTEM & GRAIN CART, AVOID SHARP TURNS.

Make wide sweeping turns when possible. Turn in a circle that is THREE TIMES the overall length of the tractor and grain cart. Sharp turns will rapidly decrease the life of the track.

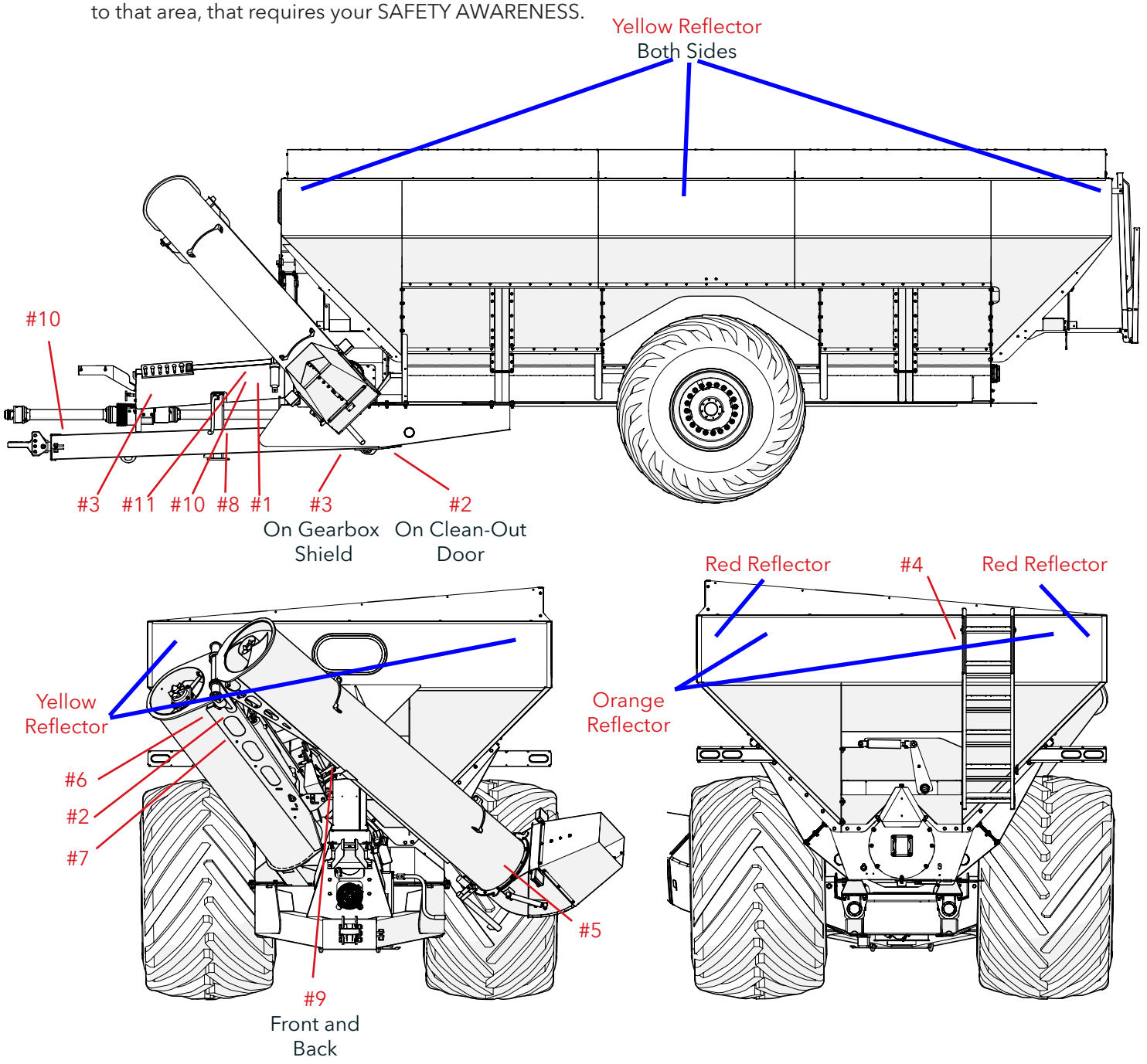
AG21185 Rev0

Decal for Carts with Track Axle System (1100 & 1300)

#11

SAFETY SIGN LOCATIONS

Types of safety sign and locations on equipment are shown in illustration below. Good safety requires that you familiarize yourself with various safety signs, type of warning, and area or particular function related to that area, that requires your SAFETY AWARENESS.



ITEM	PART #	QTY	DESCRIPTION
1	**AG21181**	1	SAFETY DECAL KIT (INCLUDES DECALS 1-9)
9	**AG21127**	2	CHECK ALL LUG NUTS DECAL
10	**AG21185**	1	TRACK TURNING DECAL
-	**AA21071**	2	REFLECTOR RED 2 X 9
-	**AA21072**	10	REFLECTOR YELLOW 2 X 9
-	**AA21073**	2	NONREFLECTIVE ORANGE 2 X 9
Please order replacement parts by PART NO. and DESCRIPTION			

TORQUE SPECIFICATION

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

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

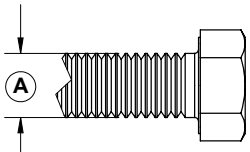
BOLT TORQUE DATA FOR STANDARD NUTS, BOLTS, AND CAPSCREWS.

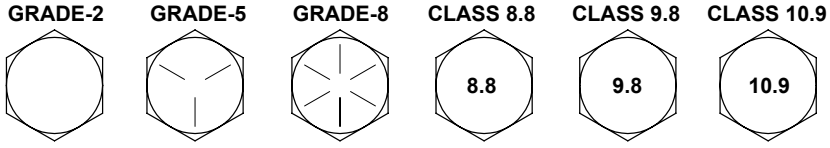
Tighten all bolts to torques specified in chart unless otherwise noted. Check tightness of bolts periodically, using bolt chart as guide. Replace hardware with same grade bolt.

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

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

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





Lug Nut Torque

Lug Nut Size	Torque
M22 X 1.5	500-550 ft/lbs (oiled)
.75" NF	420 ft/lbs (dry)

Wheel Bearing Adjustment

1. Tighten castle or slotted hex nut to initial torque indicated on chart while turning hub in both directions to insure all bearing surfaces are in contact.
2. Back nut off and repeat step #1.
3. Back nut off, do not allow hub to turn.
4. Tighten nut to final torque indicated on chart.
5. Install cotter pin, if needed loosen or tighten nut to the next closest locking slot.
6. Check hub for end play.
7. If end play can be felt, start over and readjust bearings. If end play is felt again, try readjusting with a different castle or slotted hex nut.
8. The bearing are set correctly when no end play can be felt after adjustment.

Hub	Initial Torque	Final Torque
10 Bolt (1100-1300 bu Dual)	100 ft/lbs	65 ft/lbs
10 Bolt	150 ft/lbs	100 ft/lbs
20 Bolt	150 ft/lbs	100 ft/lbs

- Torque wheel Nuts to their required torque (450-500 ft-lb).

- Inflate Tires to the proper air pressure (see **Grain Cart Check List**).

- Grease all Zerks (see **Grease and Lube**).

- Check gearbox oil level (see **Grease and Lube**).

- Check that all lights are in proper working condition.

- Check to make sure all safety decals are properly installed and are not damaged.

- Paint all parts scratched in shipping.

- Check and remove SMV shipping cover.

PRE-USE PREPARATION

Before and after each season follow the **Grain Cart Check List** to prevent downtime in the fields caused by field breakdowns. Many breakdowns can be eliminated by periodic equipment maintenance. By spending a little time running over the checklist, following proper after-season care, you can save time and money later on.

HOOKING UP TO THE TRACTOR

Before connecting the equipment to the tractor consult your dealer on the proper horsepower requirements and capabilities for the given equipment.

1. Ensure equipment is parked in a manner that prevents the unit from rolling.

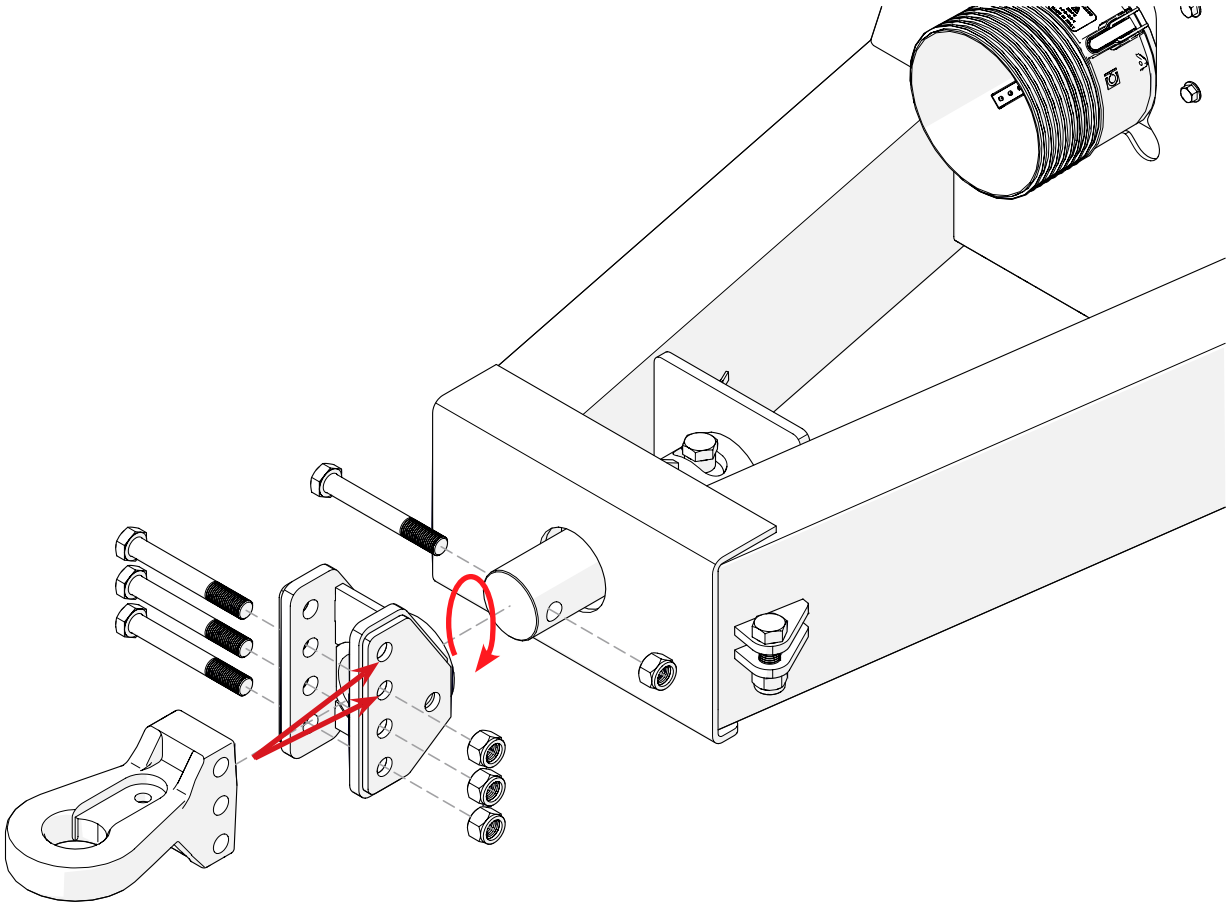
2. If the tractor is equipped with a 3-point raise and check for sufficient clearance. In some cases it may be necessary to remove the 3-point quick attach to avoid damage while turning.

3. Position the PTO shaft and hoses out of the way.

4. Connect the equipment with a correct sized pin. Match the pin to the clevis-type draw bar of the tractor. Category 4 pins are 1-3/4" Diameter and Category 5 pins are 2-3/4" Diameter. Secure the pin with a locking devise.

WARNING: TO PREVENT CRUSHING OR INJURY. DO NOT STAND BETWEEN THE EQUIPMENT AND THE TRACTOR WHILE HITCHING.

5. The hitch of the grain cart is design to be adjusted. The channel mount can be flipped for added adjustment if necessary. Adjust the hitch to level the grain cart.



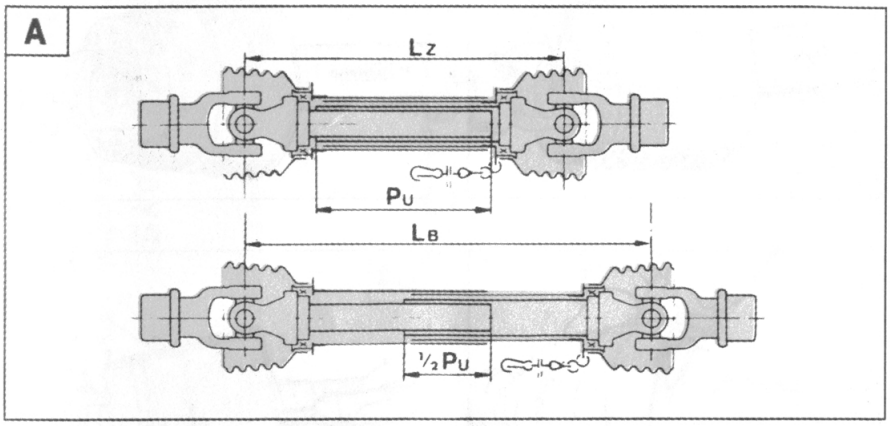
6. Connect the PTO to the tractor. Check the PTO overlap length. Try to obtain the greatest possible overlap without bottoming out the PTO shaft in its maximum operating condition. Make sure draw bar length and PTO telescoping limits are adequate for uneven terrain, gullies, levees, etc. Check for PTO clearance around the 3-point arms.

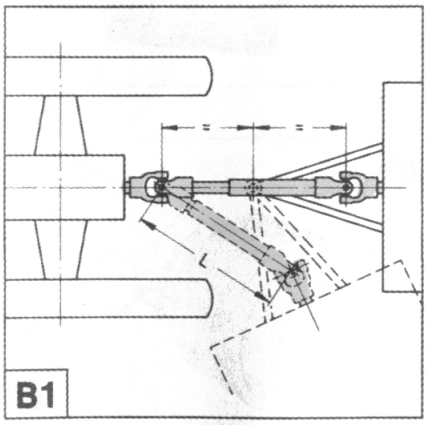
a. Maximum Operating Length LB
Maximum operating length should not be more than half of telescoping member length (**Pu**).

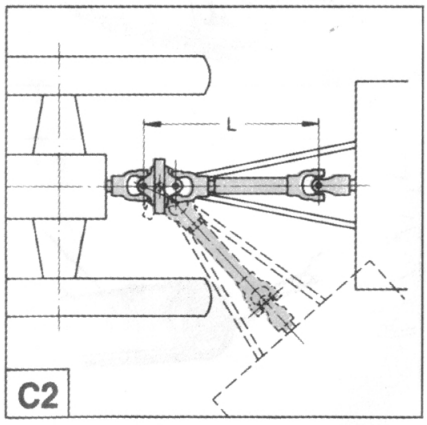
b. Maximum Joint Angles (B1 & C2)
Do not exceed normal operation joint angle of 25°.
Ensure equal joint angles and switch off PTO if joint angles are too large and/or unequal.

c. Lubrication
Lubricate before starting work and every 8 hours of operation.

d. Please refer to the PTO Manufacturer's Manual, which is located in the manual holder for further details regarding usage, service and lubrication grease locations.







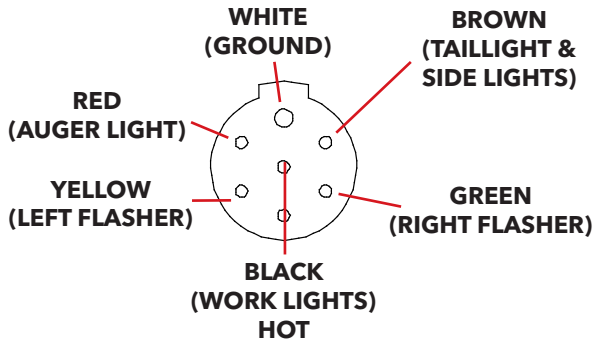
WARNING: BE CERTAIN ALL POWER IS OFF WHEN CONNECTING PTO OR HYDRAULIC LINES TO THE TRACTOR

7. Connect the safety chains to the tractor. Ensure there is enough slack for turning.

8. Connect the Hydraulic hose couplers. Clean hose ends to prevent any contamination from damaging hydraulic components.

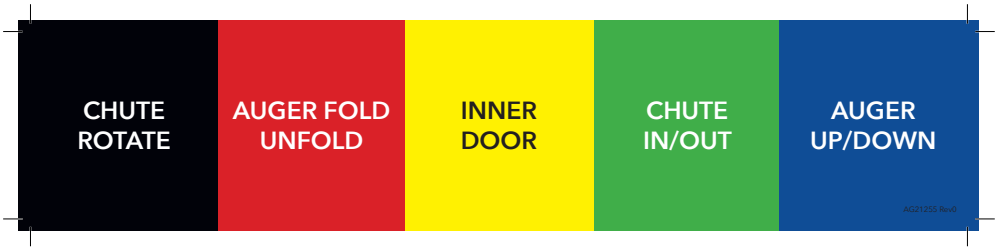
9. Connect the 7 pin terminal for the lighting system, electric over hydraulic wire, and the scale wire if necessary. Verify that all lights are in working condition. Some older tractors may need to be rewired to comply with the ASABE lighting standards for 7 pin terminal wiring.

10. Raise the jack all the way up. Place handle in the stowed position.



OPERATION

AUGER FOLDING & UNFOLDING NON-PENDANT



1. Connect the hydraulic hoses. Connect the same colored hoses to the same remote. Follow the label shown for each colors function.

WARNING: Never fold or extend the auger while PTO is rotating.

2. Verify that there is no obstructions in the way of the auger move the lever connect to red hoses (auger fold). To fold move the lever in the opposite direction.
3. To adjust the chute position move the lever connected to the black hose covers (chute rotate) or green hose covers (chute in/out).

AUGER FOLDING & UNFOLDING PENDANT

Before operating the pendent become familiar with its buttons and their function. Once you are familiar with its functions connect the fused power wire to a key controlled +12VDC source and the other wire to a -12VDC power source. Also connect the control wire from the cart.

AUGER IN: Folds the auger into the rest

AUGER OUT: Folds the auger out of the rest

DOOR OPEN: Opens the grain flow doors

DOOR CLOSE: Closes the grain flow doors

CHUTE RIGHT: Pivots the chute right

CHUTE LEFT: Pivots the chute left

CHUTE UP: Pivots the chute up

CHUTE DOWN: Pivots the chute down

AUGER UP: Pivots the entire auger up (trigger up)

AUGER DOWN: Pivots the entire auger down (trigger down)





UNFOLDING

1. Connect the hydraulic hoses. Verify that the pressure line is able to be placed in detent. Place the remote in detent.

WARNING: Never fold or extend the auger while PTO is rotating.

2. Verify that there is no obstructions in the way of the auger and press **AUGER OUT.** Wait for the auger to fold out. To stop the auger from folding mid fold press **AUGER OUT** again.
3. Now that the auger is unfolded it can be raised and lowered by using the trigger function on the pendant.
4. To adjust the chute position press and hold either **CHUTE RIGHT** or **CHUTE LEFT.**

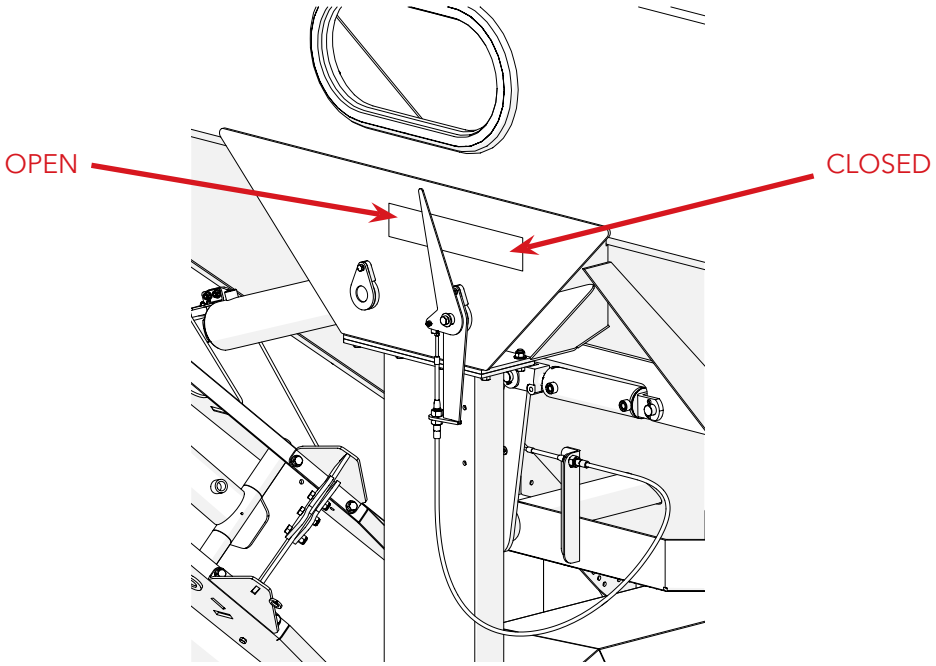
FOLDING

1. Move the auger to the max up position by pressing and holding **AUGER UP**.
2. After the auger is all the way up press **AUGER IN.** Once the auger is in the rest the stowed indicator light will light up.

Note: Refer to troubleshooting guide if auger does not fold correctly.

Note: Before filling box with grain, become familiar with hydraulic functions to ensure all functions operate correctly.

1. With the gate indicator in the closed position, fill the box with grain. **(Never fill grain cart unless the inner door is closed.)** The open and closed position will switch for a right or left hand auger. Shown below is a right hand auger with the closed position on the left side. On a left hand auger the closed position will be on the right side.



2. With the PTO disengaged, engage the hydraulic lever for the pendant control or non-pendant move the hydraulic lever connected with the red hose covers and extend the auger. **(Never fold or extend the auger while PTO is rotating.)**

3. **Engage PTO at a slow rpm.** Increase PTO rpm to desired speed. **(Never exceed 1000 RPM PTO speed.)**

4. Open inner door to 1/3 to 1/2 open by pressing and holding **DOOR OPEN** or moving the hydraulic lever connected with the yellow hose covers.

5. Adjust inner door opening for desired grain flow.

Note: If an auger slugging occurs, see **SLUGGED AUGER PROCEDURE**

When finished filling:

1. Close inner door by pressing **DOOR CLOSE** or moving the hydraulic lever connected with the yellow hose covers and reduce speed on the PTO.

2. When grain stops flowing, disengage PTO.

3. After PTO comes to a complete stop, fold auger into transport position. **(Never fold or extend the auger while PTO is rotating.)**
   -Disengage hydraulic lever for pendant control.

DO NOT PULL THE GRAIN CART UNLESS THE AUGER IS IN THE STORED POSITION. Never do maintenance work or service cart while the tractor is running.

SLUGGED AUGER PROCEDURE

1. Close Inner door.

2. Turn off PTO and wait for drive line to stop turning.

3. When disengage the drag auger first remove the pin and guard. Next push in the disengage handle on the gear box.

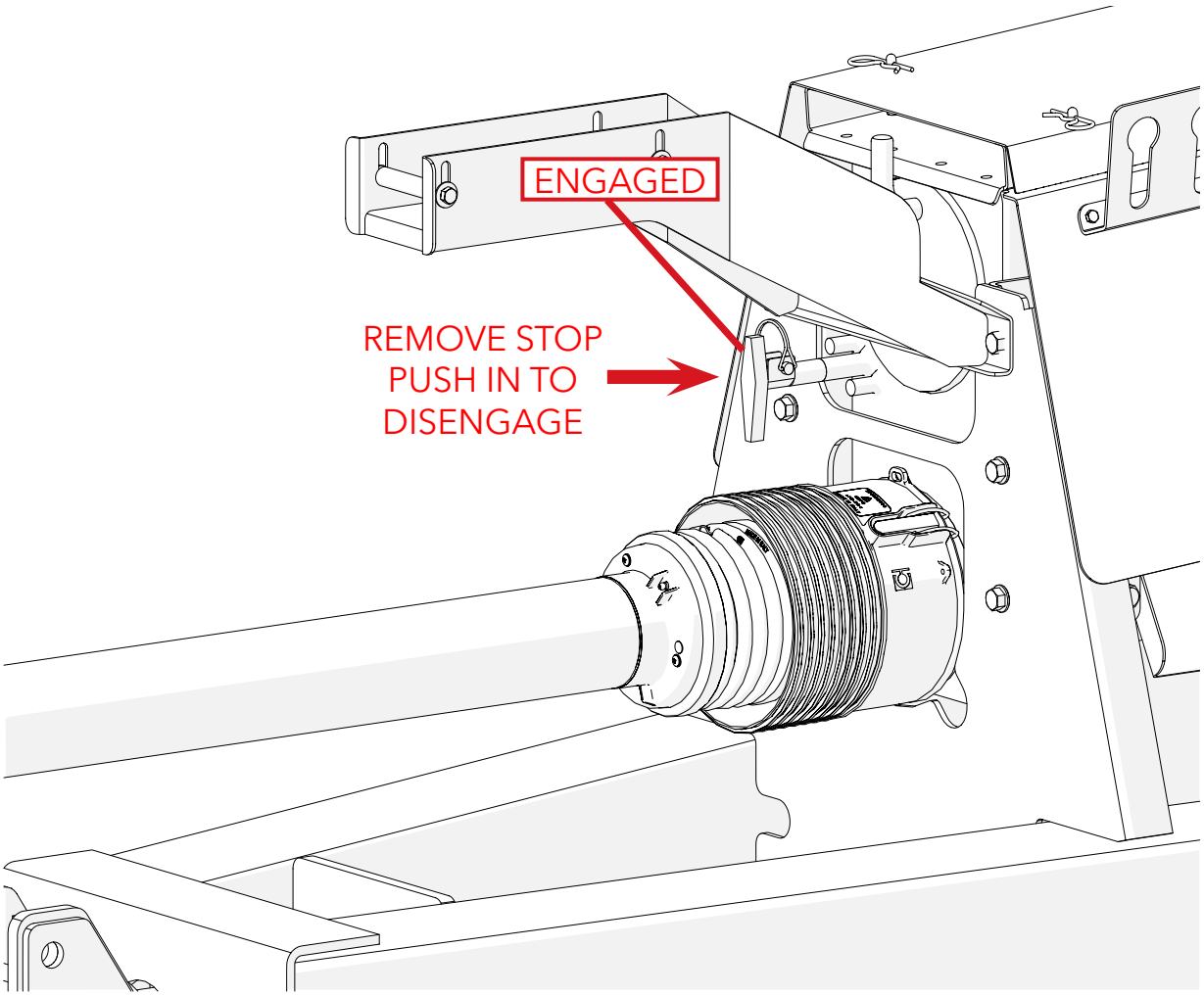
4. Slowly engage the PTO and empty out the vertical auger.

5. Turn off PTO and wait for drive line to stop turning. Once stopped pull out handle to reengage the drag auger. Reinstall the pin and guard.

6. Slowly engage the PTO and empty out the drag auger.

NOTE: If the drag auger is still slugged after the procedure listed above open the clean-out door on the drag to drain out some grain.

WARNING: ONLY OPEN THE CLEAN OUT DOOR WHEN THE PTO IS NOT TURNING

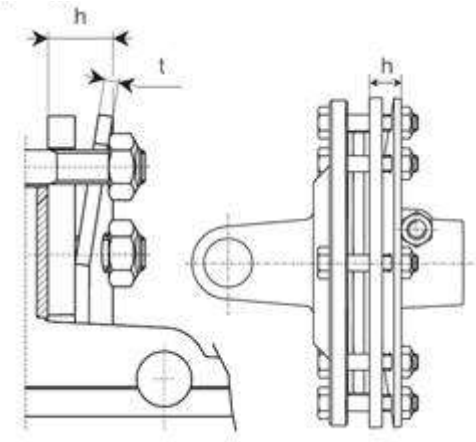


TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
No Pendent Functions	No power to pendent	Check Fuse and make sure there is power being supplied to the pendent
	No Hydraulic pressure	Check hose connections and make sure the pressure line is being pressurized
	Pinched cable or bad connections	Inspect cables unplug and clean connections
Lights do not work correctly	Tractor is not wired correctly	Rewire tractor to ASABE standard
	Damaged or cut light harness	Fix or replace light harness
	Bad light	Replace light
Auger will not unfold	Front limit switch is out of adjustment	Adjust limit switch so that it is activated while cylinder is all the way in
	Faulty or bad limit switch	Replace limit switch
	No power to hydraulic coil	Unplug connector on coil and check for power
Auger will not fold	Auger not raised all the way up	Raise auger
	Front limit switch is out of adjustment	Adjust limit switch so that it is activated while cylinder is all the way in
	Faulty or bad limit switch	Replace limit switch
	No power to hydraulic coil	Unplug connector on coil and check for power
Auger will not raise or lower when unfolded	Front limit switch is out of adjustment	Adjust limit switch so that it is activated while auger is in the rest
	Faulty or bad limit switch	Replace limit switch
	No power to hydraulic coil	Unplug connector on coil and check for power
Stowed light is not lighting up when auger is in rest	Rear limit switch is out of adjustment	Adjust limit switch so that it is activated while auger is in the rest
	Faulty or bad limit switch	Replace limit switch
	Loose light plug	Grease with dielectric grease or replace plug

PTO FRICTION CLUTCH

The lower drag auger is protected by a fiction disk torque limitor. In the event that the disk are damage replacement disks will need to be purchased. To set the disk to the correct torque use a calipor to measure "h" in millimeters. Adjust the bolts until the "h" value is obtained by every bolt.

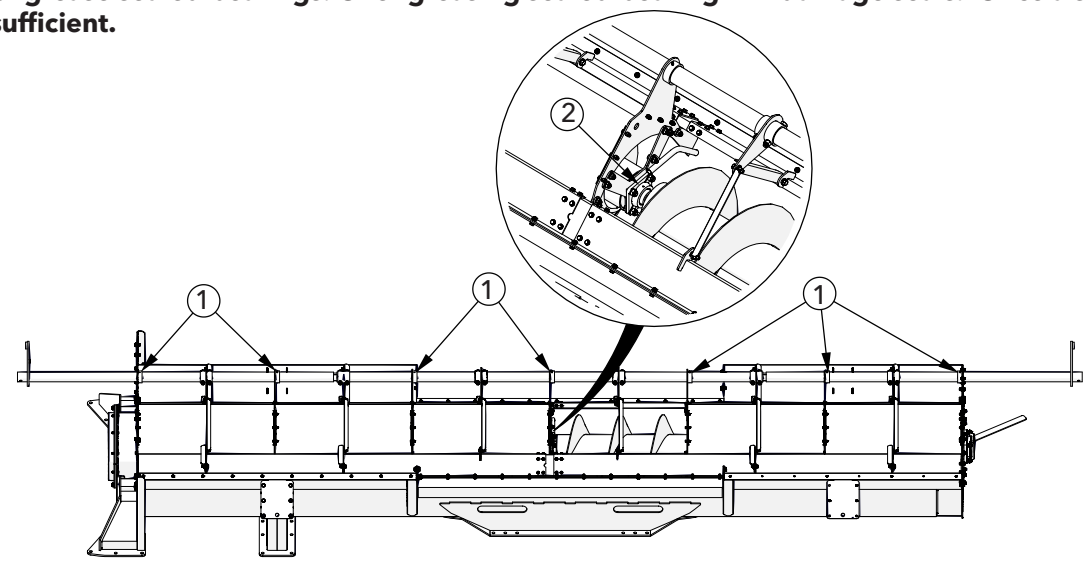


GRAIN CART SIZE	h Value mm	Setting Nm
1100 1300 1700	18	1450
1500 2200	17.5	1700

GREASE & LUBE

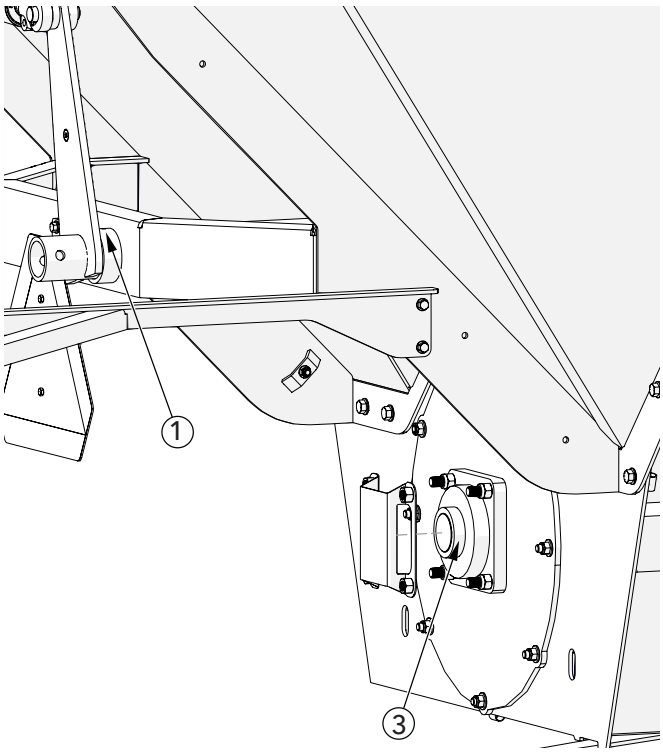
NOTE: **Grease all zerks before each use or when needed with a good quality lubricant.**

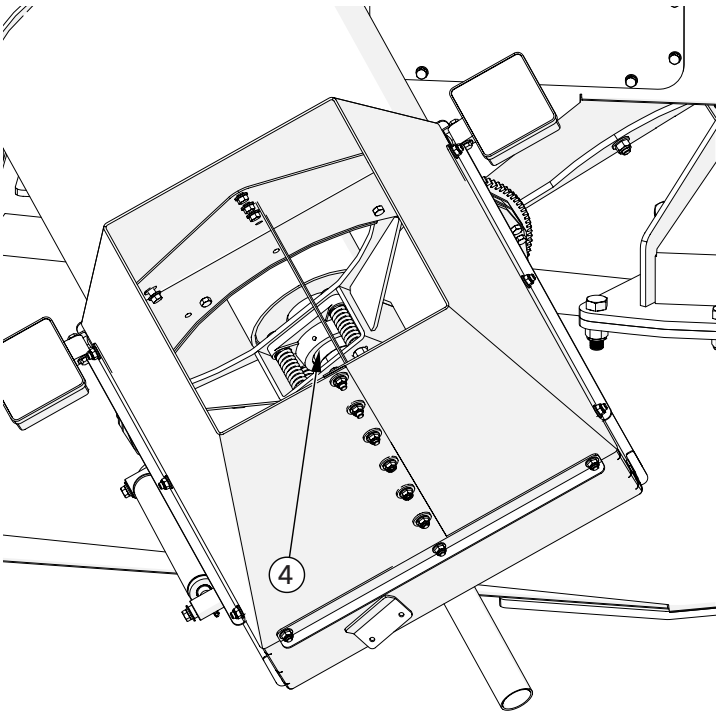
Do Not over grease sealed bearings. Over greasing sealed bearing will damage seals. Once a season is generally sufficient.



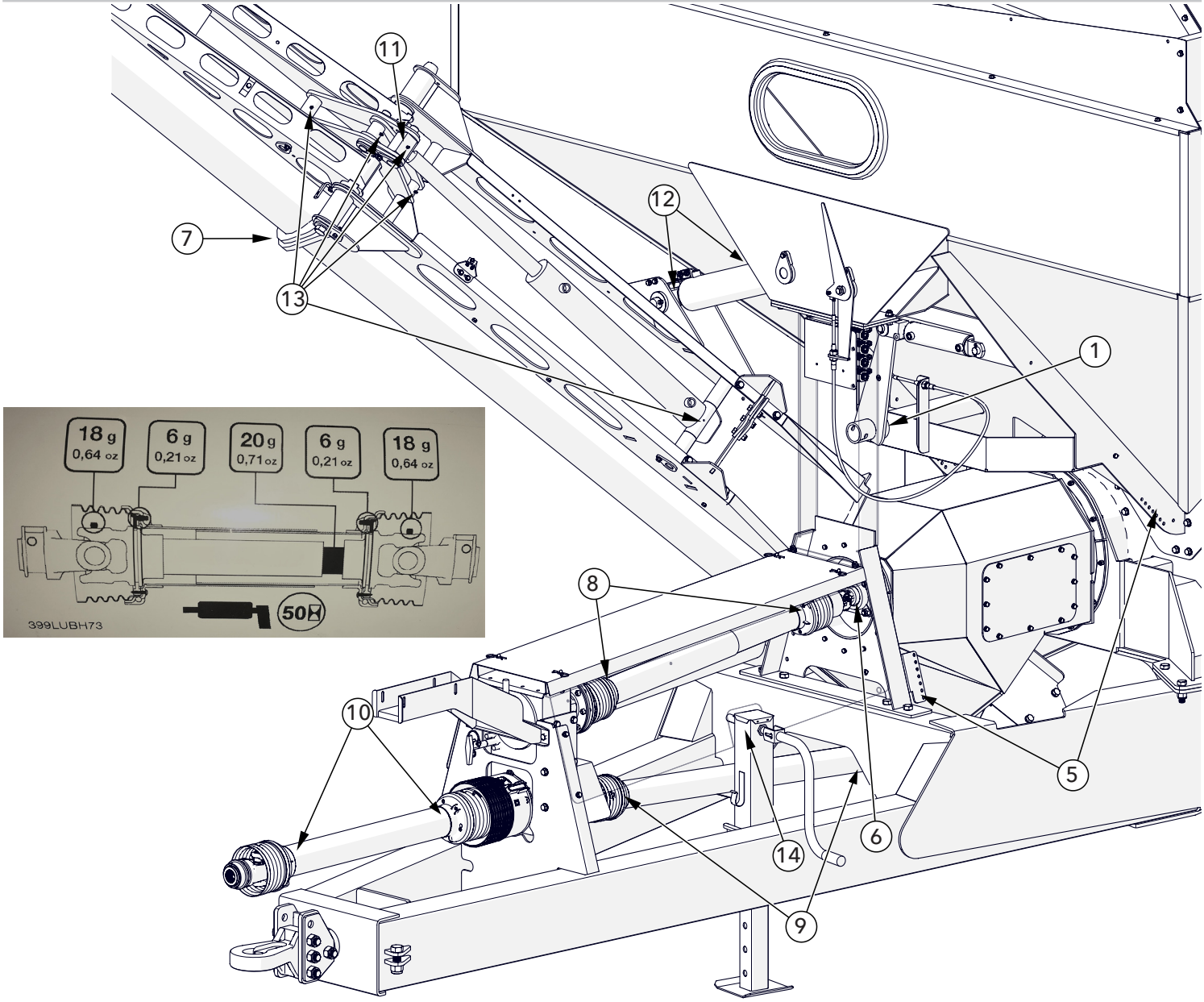
Reference number #1 Is the bushings on the inner door. There are eight (1100), nine (1300 & 1700), or ten (1500 & 2200) grease zerks on this door. There are two two zerks outside of the tank. One is located on the front and the other is on the rear

Reference number #2 Is a fixed self centering sealed bearing. The grease zerk for this item is located on the rear grease bank labled as bearing-- Do not over grease sealed bearings.





Reference numbers #3 -#4 Are fixed self centering sealed bearings.-- Do not over grease sealed bearings.



Reference number #5 Is the zerks on the front auger pivot and on the rear auger pivot. The grease zerks for this item is located on the front and rear grease banks. The Lower four zerks on the banks are for these items.

Reference numbers #6 -#7 Are fixed self centering sealed bearings. The grease zerk for item #6 is located on the front grease bank labled as bearing-- Do not over grease sealed bearings.

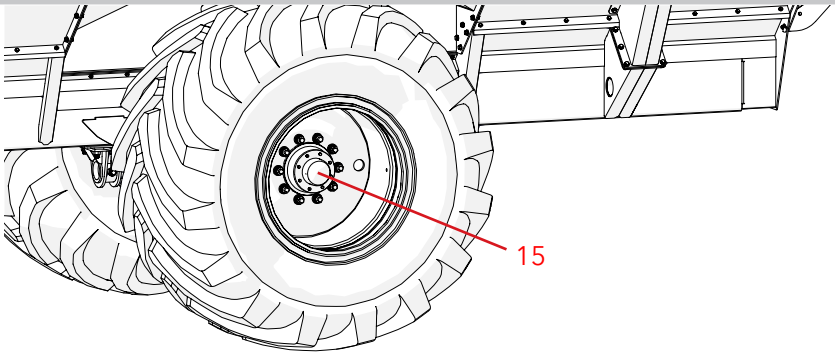
Reference numbers #8 -#9 -#10 Are U-Joints on PTO Shafts-- See chart above. There are also zerks on telescoping PTO Shafts with two slots in each housing -- See chart above

Reference number #11 - Is the hinge for the outer tube.

Reference number #12 - Is the folding cylinder ends. There are two zerks in this area one on each end of the cylinder.

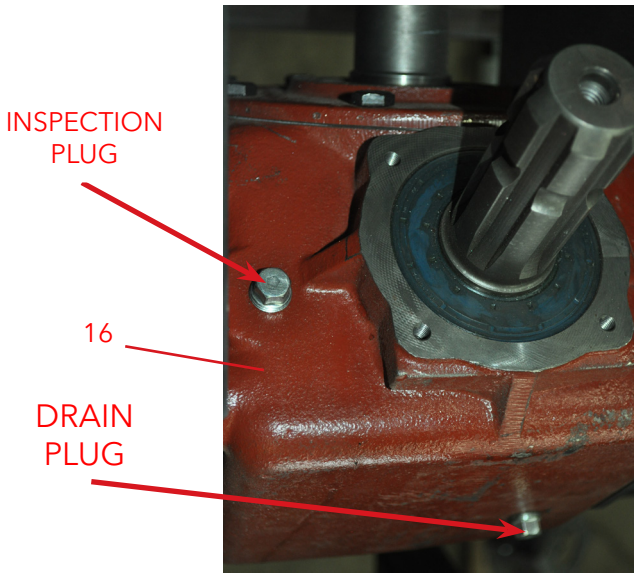
Reference number #13 - Is the auger pivot cylinder ends and linkages. There are five zerks in this area, one on each end of the cylinder and on the end of the linkages.

Reference number #14 - Are zerks on the jack.

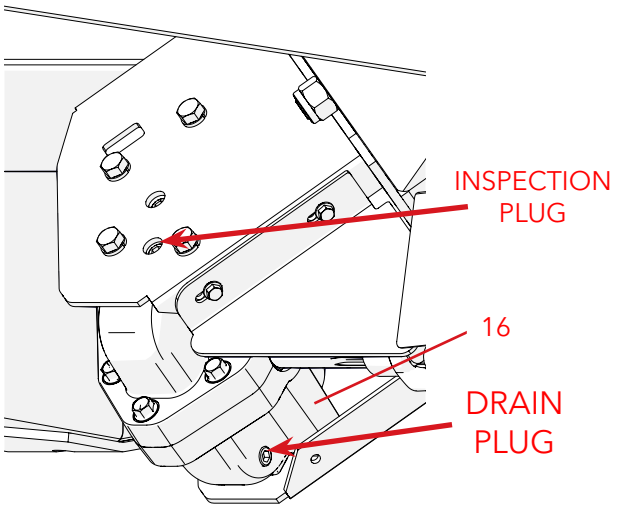


Reference numbers #15 - Is the axle hubs with inner and outer bearings and races -- Inspect regularly, pack bearings and replace inner wheel seal as needed.

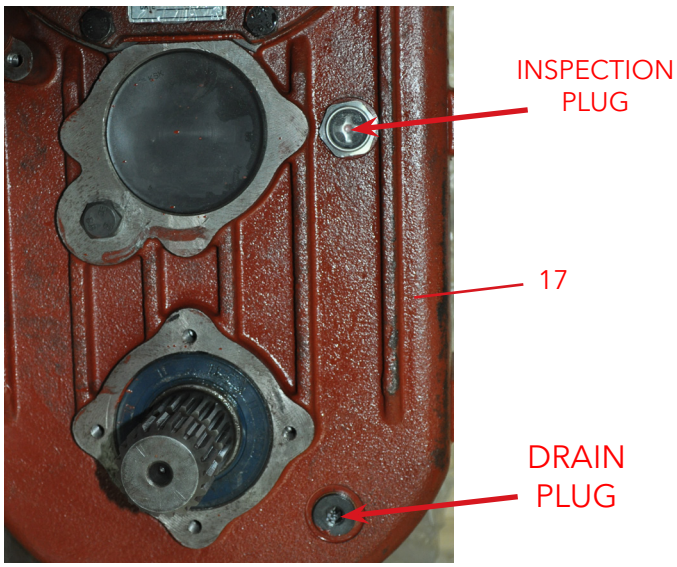
Comer Gear Box



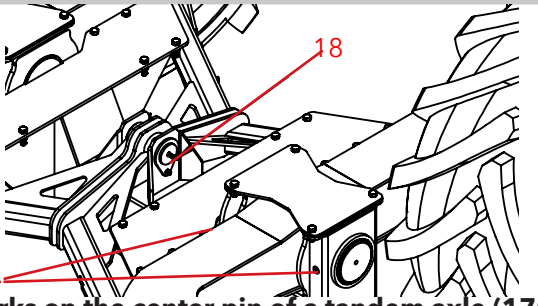
Superior Gear Box



Reference number #16 - Auger gear box is filled with 80-90 gear lube -- First identify they type of gear box on the grain cart. Superior and Star gear boxes have an S lasered into the mount. To identify the gear box brand find the name plate on the side of the gearbox through the cutout window in the mount. To check gear box find inspection plug. Turn out plug. For a Comer gear box the gear lube should be 1" below inspection hole. Should be about 96 oz. of 80-90 gear lube. DO NOT OVER FILL!!! For a Superior gear box there should be about 55 oz of 80-90 gear lube. For a Superior gear box the gear lube should be approximately 3" below inspection hole. DO NOT OVER FILL!!! For a Star gear box there should be about 3.5 Liters of 80-90 gear lube. DO NOT OVER FILL!!! When the gear box is full be sure to reinstall the plug.



Reference number #17- Main gear box is filled with 80-90 gear lube -- To check gear box find inspection plug. Turn out plug. Gear lube should just start to run out. Should be about 190 oz. of 80-90 gear lube. DO NOT OVER FILL!!! When gear box is full be sure to replace inspection plug.

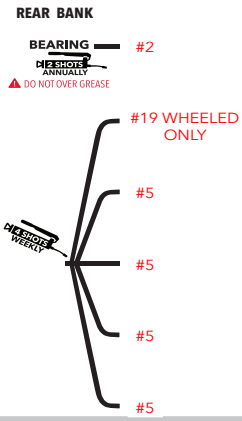


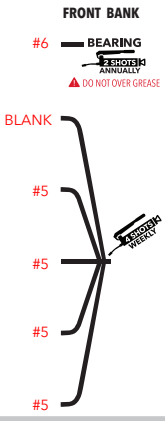
Reference number #18 - #19 Is the zerks on the center pin of a tandem axle (1700 & 2200 only). The grease zerk (#19) for this item is located on the rear grease bank. The second zerk down on the bank is for this item.

GREASE & LUBE SCHEDULE

REFERENCE NUMBER	DESCRIPTION	NUMBER OF ZERKS	QTY.	HOURS
1	Inner Door Bushings	*	2 Shots	Annually
2	Bearing- Center of Drag Auger	1	2 Shots	Annually
3	Bearing- Rear of Drag Auger	1	2 Shots	Annually
4	Bearing- Vertical Outer Auger	1	2 Shots	Annually
5	Auger Pivot Ring- Front and Rear	8	4 Shots	Weekly
6	Bearing- Front of Drag Auger	1	2 Shots	Annually
7	Bearing- Vertical Lower Auger	1	2 Shots	Annually
8 9 10	PTO Drive Shafts	5 (per shaft)	**	50 Hours
11	Auger Pivot Pin	1	4 Shots	Annually
12	Cylinder End Pivots- Height Adjust Cylinder	2	2 Shots	Annually
13	Cylinder End Pivots- Fold Cylinder & Linkages	5	2 Shots	Annually
14	Jack Zerks	2	2 Shots	Annually
15	Bearings- Wheel Hubs -- Inspect seasonally and pack when required	2 (bearings per wheel)	-	Annually
16	Gear Box- Auger -- Check oil level every month and replace every season.	1 (gear box)	Comer 96 oz Superior 55 oz	Annually
17	Gear Box- Main Parallel Shaft -- Check oil level every month and replace every season	1 (gear box)	190 oz	Annually
18	Tandem Axle Pivot (1700 & 2200 ONLY)	1	4 Shots	Weekly
19	Tandem Axle Pivot (1700 & 2200 ONLY)	4	4 Shots	Weekly
* See reference item for more details on different cart models ** Refer to decal on shafts for locations of zerks and amounts of grease.				

GREASE BANKS





GRAIN CART CHECKLIST

Downtime in the fields caused by field breakdowns is costly and time consuming. Many breakdowns can be eliminated by periodic equipment maintenance. By spending a little time running over this checklist, following proper after-season care, you can save time and money later on.

WARNING: To Prevent Serious Injury Or Death

- **Make sure ALL guards and shields are in place.**
- **Keep hands, feet, and loose clothing away from rotating parts.**

Before Going To The Field :

1. HYDRAULIC HOSES

- Check all hoses for worn or soft spots.
- Check to make sure hoses are not kinked or pinched.
- Check for leakage in any of the lines and cylinders.

2. CHECK

- Tires for proper inflation.
- Lug nuts for proper torque.
- Lights for proper operation.
- Oil level in gearbox.
- Zerk locations, and grease as needed.
- All guards and shields. Replace or repair if necessary to insure proper protection.

TIRE SIZE	TIRE MANUFACTURER	MAXIMUM PSI. (COLD)
900/60R32	**ALLIANCE**	58 PSI
1050/50R32	**ALLIANCE**	55 PSI (1100) 58 PSI (2200)
1250/50R32	**MITAS**	41 PSI
1250/50R32	**ALLIANCE**	46 PSI
1250/35R46	**GOODYEAR LSW**	35 PSI

3. VISUALLY INSPECT

- Inspect tires for cracks and worn spots.
- Inspect inside of Grain Cart, make sure that all guards are in place and in good shape. Be sure auger is free from any obstructions.
- Inspect for any loose bolts, worn parts, or cracked welds, and make any necessary repairs.

4. REPLACEMENT PARTS

- Replace all worn or damaged parts.

After Season Care:

- Open lower auger clean out door to allow box to drain.
- Open drag auger clean out doors and remove debris.
- Keep auger folded back during storage.
- Grease all zerk locations (see page 20-23 for maintenance locations).
- Repack wheel bearings before storage.
- Inspect tires for puncture holes or any other type of leak and repair as needed.

DEMCO

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Demco warranty policies, operator manuals, and product registration can be found online:

www.demco-products.com