

Elston Manufacturing GA-300 Owners Manual

Table of Contents

1 Safety Information.....	1
2 General Information.....	2
3 Using Your Gopher Getter.....	3
Initial Setup.....	3
Operating Instructions.....	4
4 Maintenance.....	7
Every use:.....	7
Every season or 200 lbs of bait:.....	7
5 Application Rates.....	8
6 Parts List.....	1-1


1 Safety Information

WARNING

The baits used in this machine are highly toxic and can cause serious injury or death if used improperly. Always follow all precautions on the label for the bait you use. Store bait as recommended between applications. Do not store bait in the bait box.

WARNING

Improper operation of a tractor with an implement can cause serious injury or death. If you are the least bit unsure of your ability to safely operate a tractor with an implement, find someone you respect with experience to show you how to operate a tractor safely.

 Please read this manual and all safety stickers on the gopher getter before operating it.

Before I continue, I want to leave you with a couple of safety ideas I believe are always worth repeating.

Operating for years without an accident is not the same as safety. - It is possible to do something unsafe for years and not be hurt. This does not mean it is alright to continue this unsafe behavior; it just means you have been lucky. For example, I remember a farmer who never had a serious accident and who wasn't wearing his safety belt (that day at least). He rolls his tractor while moving round bales out of a ditch and he ends up underneath the tractor. Thankfully, in this case, he was only hurt, not killed, thanks to the good hearing of a neighbor who heard his calls for help. I hope we can agree that isn't operating safely. I can think of other stories of farm injuries with a similar theme and I expect you can as well. Please take the time to consider all those little things you do before your luck runs out.

Don't take short cuts with safety when you are in a hurry. - It is tempting to think that just because it will not take long nothing will go wrong. You might get lucky but then again you might end up as a sad story in the newspaper. I'll admit I've done it before and I expect most of you have too. If I may be blunt for a moment, DON'T take shortcuts.

Be safe.

2 General Information

Thank you for purchasing a Gopher Getter from Elston Manufacturing. We are confident this product will provide you with years of service.

This gopher getter works by creating an artificial tunnel. The poison is dropped into the tunnel where the gophers find it and die underground out of reach of other animals. The depth of the tunnel is adjustable to better match the depth that the gophers are digging in your area.

The gopher getter will apply approximately one pound per acre of Elston gopher getter bait when the burrows are spaced 20 feet apart where needed over an average field. When used with rolled oats and the seeder slide with the larger 7/8" opening, the application rate will be slightly less than one pound per acre. These application rates are for typical infestations where gophers are not present over the whole field so some areas will not need to be treated. For more exact rates please refer to page 8.

We always welcome feedback on our products. If you have comments, suggestions, or problems with the unit please contact us.

3 Using Your Gopher Getter

Before using the gopher getter, remove the parts bag from the bait box. The parts bag should contain three parts: one G4-208A Seeder Slide with 7/8" Hole and two G4-286 Lower Poison Guide Plates.

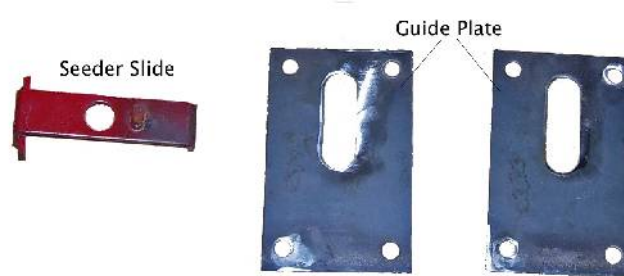


Illustration 1: Parts Kit

Initial Setup

You have 4 primary adjustments with this machine: the depth of the torpedo tube, the depth of cut of the coultter, the angle of the torpedo tube, and the setup of the bait box. The tire pressure should be 30 psi. Add an additional 5 psi for each 100 lbs of weight on frame or down pressure on hitch up to the maximum pressure on the tire. Do not add more than 300 lbs.

Depth of Torpedo Tube:

The depth of the torpedo tube should be set so the gopher getter makes a tunnel at the depth that gophers tunnel in your area. As gopher dig at a range of depths even in the same area, aim to set the gopher getter to the average depth. It is not necessary to be exact.

To set the depth of the torpedo tube:

- 1) Loosen and remove the bolts attaching the rear (packer) wheels to the gopher getter knife assembly.
- 2) Move the packer wheels up or down to achieve the desired depth and remove the bolt. Using the top bolt will set the torpedo tube to a depth of approximately 10" and the bottom bolt to approximately 6". The exact depth will depend on the angle of the torpedo tube.

Depth of Coultter Blade

The best depth is just deep enough to do the job. If it is too deep, it will be more difficult to get the gopher getter into the ground. If it is too shallow, roots will catch on the knife and tear up the ground. In sod or pasture, set the coultter just deep enough to cut the upper layer of roots, approximately 4 or 5 inches. When operating in alfalfa, set the coultter

deeper . Either set the coulter so the bottom edge is just above the top of the torpedo tube or set it so the flange for the coulter hub runs just above the surface of the soil. Setting the coulter deeper than the center of the torpedo tube will make it significantly more difficult to get the unit into the ground. However if you have stronger soil or an older alfalfa field you should be able to set the coulter a bit shallower.

The depth of the coulter can be set by loosening the bolt on the coulter clamp and moving the coulter up or down as necessary. Make sure the coulter will not hit the frame as it runs though the soil and the hub of the coulter will not run though the dirt.

Angle of Torpedo Tube

Adjusting the length of the upper arm of the 3-point hitch on your tractor will control the angle of the torpedo tube. The gopher getter tends to work best with the torpedo tube sloping slightly downward at the operating depth. The exact angle will depend on your soil type and moisture levels but when the frame is parallel with the ground the torpedo tube will have a slight downward slope of a couple degrees that usually works good. If the angle of the torpedo tube is too steep, the gopher getter will disturb more soil. In addition, at larger angles, the gopher getter fails to effectively get to depth so the packer wheel will not turn and bait will not drop. As the torpedo tube gets too close to level, soil may plug up the slot on the bottom of the torpedo tube and prevent any poison from dropping

Setup of Bait Box

Your gopher getter is already setup for use with Elston gopher bait (milo w/0.5% strychnine). If you are using other types of poison such as oats or cracked corn or products with a lower amount of effective ingredients, you will need to replace the factory seeder slide with a seeder slide with a larger (7/8") opening (Part # G4-208A). One of these can be found in the parts package.

If you are using poison with pieces larger than 1/4" or you are having problems with poison being ground up, add additional spacer plates with long slots to allow more space for the bait. Add plates until the height of the spacer plates plus the seeder slide is larger than the second largest dimension on the bait. A maximum of 4 plates may be used. Failure to add spacer plates for bait with larger pieces will cause early failure of the seeder assembly.

Operating Instructions

WARNING

The bait used in this machine are highly toxic and can cause serious injury or death if used improperly. Always follow all precautions on the label for the bait you use. Store bait as recommended between application. Do not store bait in the bait box.

⚠ WARNING

To prevent accidents involving injury or death, do not allow anyone near the tractor or Gopher Getter while the tractor is in motion. Always follow all safety instructions provided with the tractor.

⚠ CAUTION

Risk of expensive damage and possible injury. Always check for and avoid underground pipe or other lines in the area you will be working.

NOTICE

To avoid extensive damage to your machine,

- Never backup or turn while the machine is in the ground
- Always replace the shear bolt with an identical grade 2 bolt.
- Never overtighten the one inch bolt attaching the knife to the frame or the shear bolt. They should loosely clamp the knife and allow it to pivot when the shear bolt fails.
- Always limit your speed to 5 mph or less.
- Avoid large rocks, tree roots, concrete, and culverts whenever possible. Limit your speed further in areas with these hazards.
- Stop quickly when the shear bolt fails.
- Never add more than 300 lbs combined of weight and down pressure to the machine.

The advice and tips below are generalized ones for gopher getter users throughout the country. For information specific to your area please speak with the dealer that you purchased the unit from, your local extension agent, or area farmers that our machines.

This machine works best in moist soil. It is rarely a problem, but if the soil is too wet, it will stick to the knife and the packer wheels and interfere with the depth setting of the gopher getter and cause plugging of the bait tube. Plugging can be reduced by increasing the slope of the torpedo tube but if moisture is high enough plugging is unavoidable. A more common problem is soil that is too dry. When it is, the machine will be very hard to get into the ground and it will refill the tunnel (reducing the effectiveness of the bait). Depending on your soil type, you may find the gopher getter works in a huge range of soil moisture conditions or that it works well in a fairly narrow range of conditions.

The bait that you apply with the gopher getter will be most effective if applied when gophers are active but high quality food is scarce. Spring and fall are the most effective times especially spring. When you use any type of gopher bait during the summer, expect reduced control results.

Space your burrows 20 to 30 feet apart in areas active with gophers or bordering areas with high population of gophers that are not treatable (like a neighbors CRP). The gopher getter will apply approximately one pound per acre of Elston gopher getter bait when the burrows are spaced 20 to 25 feet apart. When used with rolled oats and the seeder slide

with the larger 7/8" opening, the application rate will also be approximately 1 lb/acre. These application rates are the average over a whole field and assume an average infestation that require approximately one third of the field to be treated. If the infestation is more severe the application rate can be as high as 3 lbs/acre with the factory setup. See page 8 for a table of application rates. To limit damage from erosion, avoid making burrows straight down the slope of the hill.

You have certain types of soil or low soil moisture, the gopher getting may have trouble getting to full depth (where the packer wheel will turn consistently). First try adjusting the angle of the frame by changing the length of the upper arm on the three point. Typically, it works best when the torpedo tube is sloping slightly downward into the soil (a few degrees). If this doesn't fix the problem, you may add weight to the unit, up to 300 pounds. Feel free to build a tray or add other pieces to the unit to help hold and secure that weight. As weight is added, increase the tire pressure 5 psi for each 100 lbs of weight on frame or down pressure on hitch up to the maximum pressure on the tire.

Operating Tips

- Never turn or back up with the machine in the ground. This will damage the unit.
- Never over tighten the one inch bolt attaching the knife to the frame. The large bolt must be loose enough to allow the knife and the parts attached to it to pivot when the shear bolt fails.
- Never over grease the seeder casting. Too much grease will cause bait to build up on the interior surfaces of the unit when it contacts the bait traveling through the opening in the seeder slide and cause it to plug. A thin film of oil is all that is needed where the tripper contacts the seeder slide.
- Always replace the shear bolt with an identical grade 2 bolt. A higher grade bolt like a grade 5 this greatly increase the risk of expensive damage to the frame when you hit a large obstruction.
- Always check that there are no underground pipe or other lines in the area you will be working. There is nothing worse to hit with your gopher getter. (Yes, It's happened.)
- Always start slow especially if you're new to the gopher getter or operating in an unfamiliar field. At no point should you go faster than 5 mph. In most conditions, especially hard or rocky ground, it will be necessary to limit your speed further.
- Always stop quickly when the shear bolt fails. If you are moving quickly and/or the obstruction that you hit is especially tenacious like a tree root or an oddly shaped rock, the tip can catch long enough for the bait box to pivot around and damage itself on the frame.
- To limit damage from erosion, avoid making burrows straight down the slope of the hill.

4 Maintenance

Every use

Inspect torpedo tube/point for excessive wear or damage

Inspect shear bolt for damage, replace if necessary

Every season or 200 lbs of bait

Check if the unit needs to be greased. If so, lightly grease the unit at the grease points on the seeder casting and the packer wheel axle bearings remembering to be careful not to over grease the seeder casting

Replace any safety decals that are no longer legible.

5 Application Rates

Standard Machine Setup

Seeder Slide Used: Standard 5/8" (G4-208)

Bait Used: Gopher Getter Bait (Milo based)

	Burrow Spacing (feet)		
	20	25	30
No Plate	2.0 lbs/acre	1.6 lbs/acre	1.3 lbs/acre
1 Plate	2.7 lbs/acre	2.1 lbs/acre	1.8 lbs/acre
2 Plates	4.3 lbs/acre	3.4 lbs/acre	2.8 lbs/acre
3 Plates	5.9 lbs/acre	4.7 lbs/acre	3.9 lbs/acre

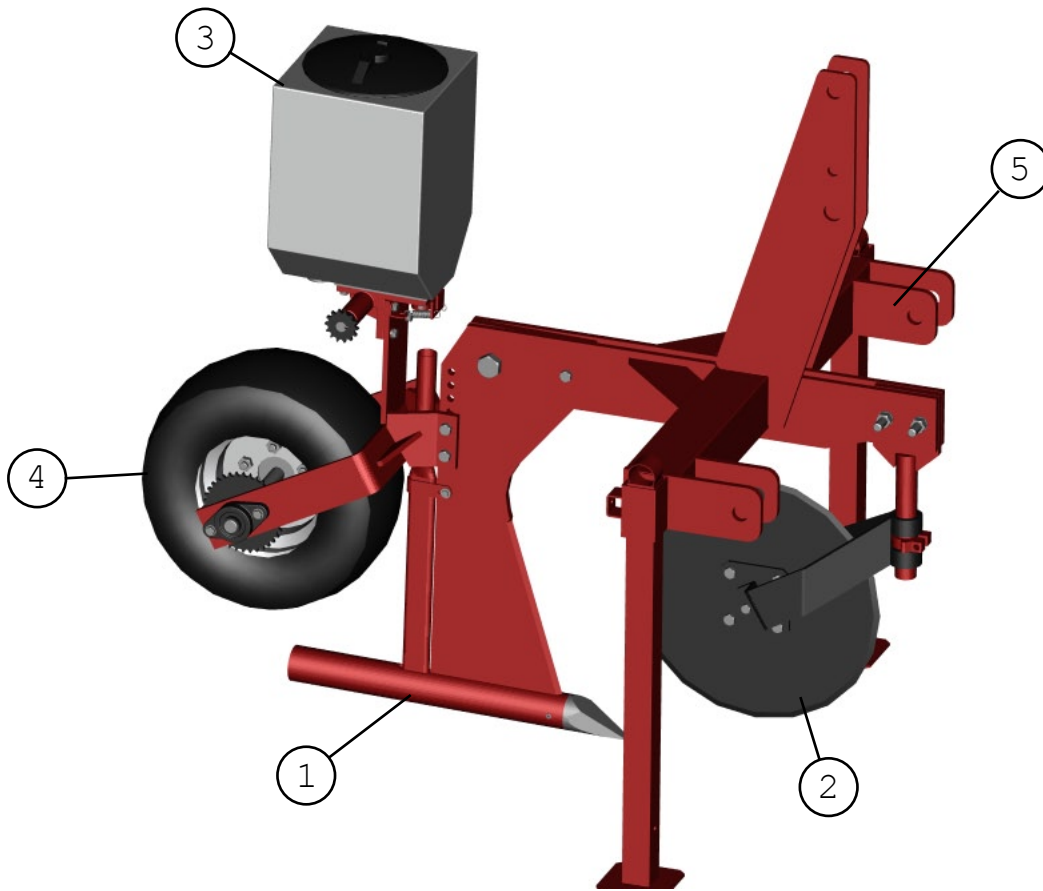
Rolled Oats Machine Setup

Seeder Slide Used: Oversize 7/8" (G4-208A)

Bait Used: Rolled Oats-based bait

	Burrow Spacing (feet)		
	20	25	30
1 Plate	2.2 lbs/acre	1.6 lbs/acre	1.5 lbs/acre
2 Plates	2.7 lbs/acre	2.1 lbs/acre	1.8 lbs/acre
3 Plates	3.6 lbs/acre	2.9 lbs/acre	2.4 lbs/acre
4 Plates	4.4 lbs/acre	3.6 lbs/acre	3.0 lbs/acre

When counting plates, only plates with long slots count toward the total. Long slots are those longer than the ones in the bottom of the bait box.

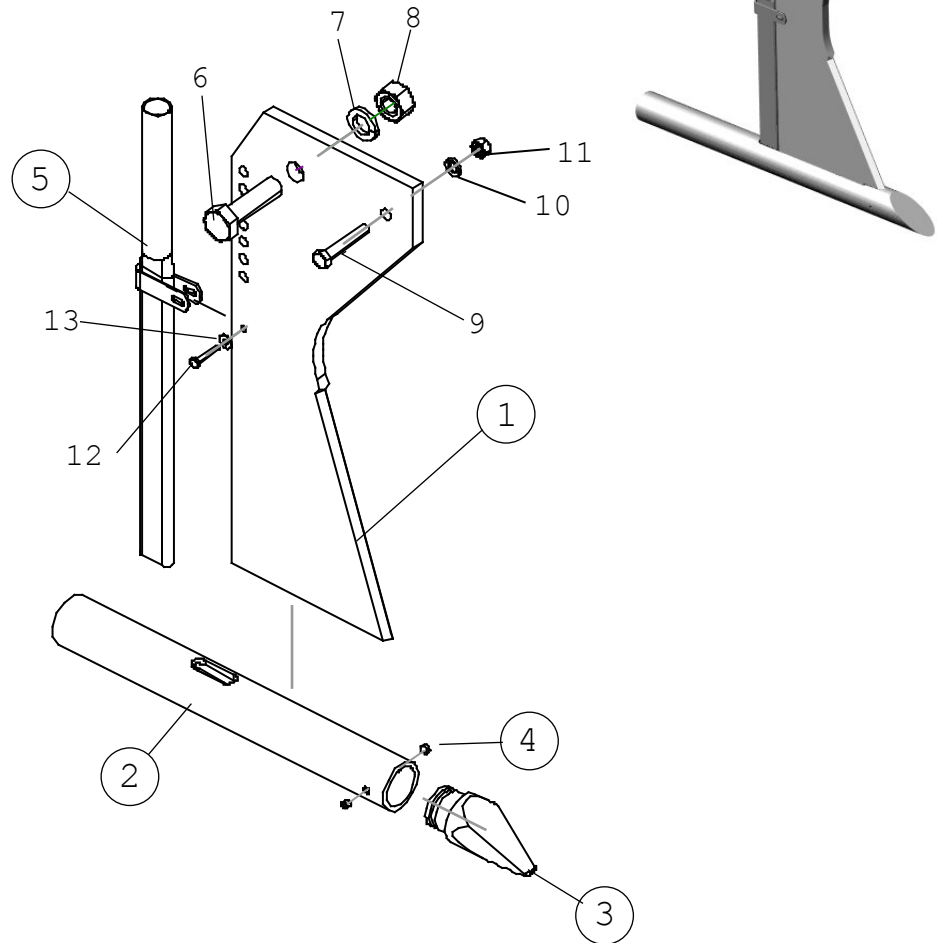


Assemblies

Common Parts

Ref #	Name	Page #	Name	Part #	Page #
1	Knife Assembly	1-2	Torpedo Point	G1-105	1-2
2	Coulter Assembly	1-3	Coulter Blade - 20"	G2-370-20	1-3
3	Seeder Assembly	1-4	Tire	G8-301	1-5
4	Packer Wheel Assembly	1-5	Tripper	G4-269	1-4
5	Frame Assembly	1-6	Knife Assembly (Complete)	G8-100	1-2

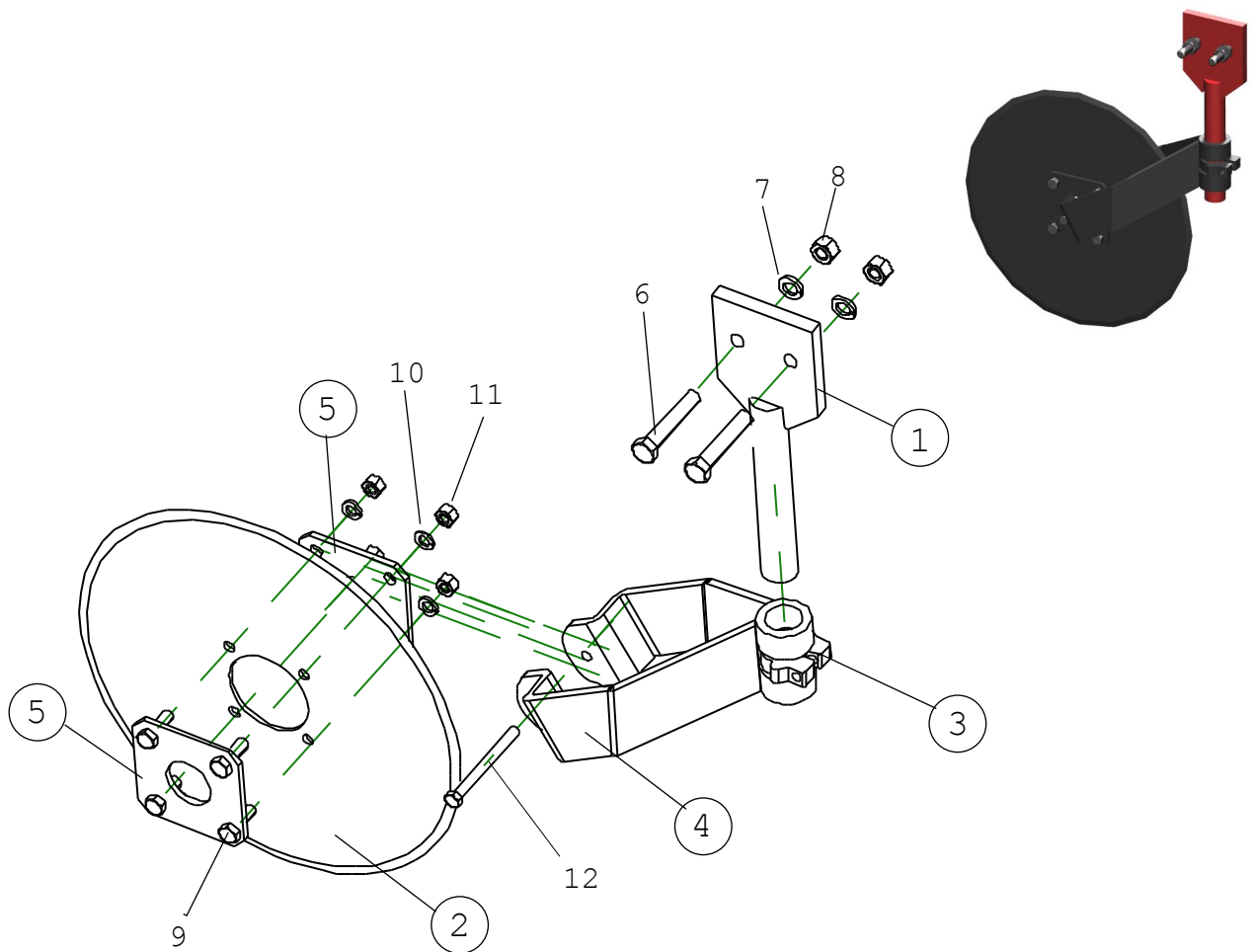
Please Call Elston Manufacturing for information on purchasing gopher bait (poison).



Ref #	Name	Part #	Ref #	Description
1	Knife	G8-101	6	1" x 3 1/2" Hex Head Bolt
2	Torpedo Tube	G8-102	7	1" Lock Washer
3	Torpedo Point	G1-105	8	1" Hex Nut
4	3/8" x 3/8" Set Screw	G1-143	9	1/2" x 3" Hex Head Bolt (Grade 2)*
5	Seeder Tube	G8-103	10	1/2" Lock Washer
1-5, 12-15	Knife Assembly (complete)	G8-100	11	1/2" Hex Nut
			12	1/4" x 1 1/2" Hex Head Bolt
			13	1/4" Flat Washer (One Not Shown)
			14	1/4" Lock Washer (Not Shown)
			15	1/4" Hex Nut (Not Shown)

* This bolt must be grade 2 (or softer). It is designed as a shear bolt to prevent damage when hitting underground obstructions. Using a harder bolt could result in expensive repairs.

All hardware listed is coarse thread (UNC) and Grade 5 or better unless otherwise noted.

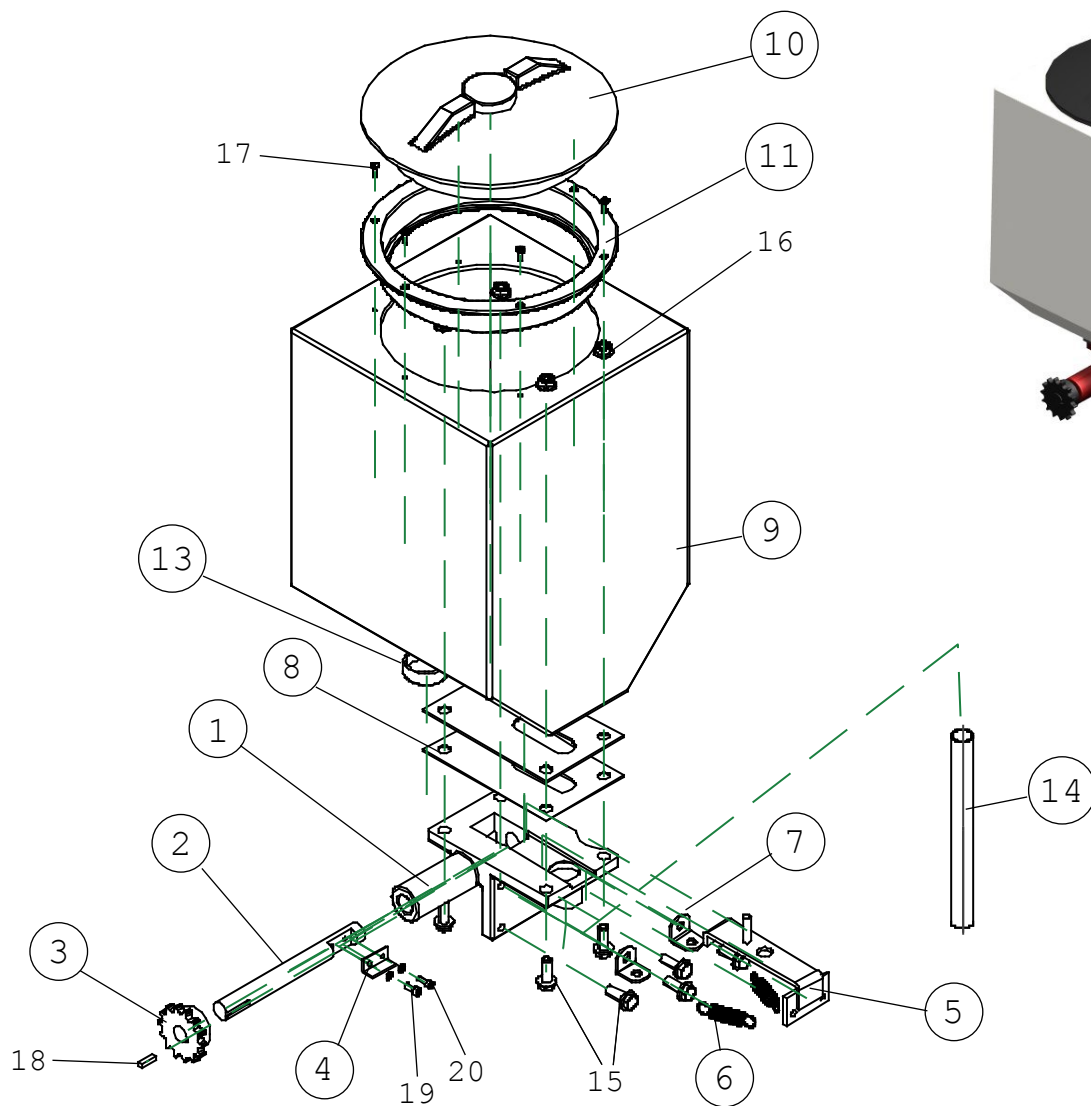


Ref #	Name	Part #	Ref #	Description
1	Coulter Shank	G8-201	6	5/8" x 3 1/2" Hex Head Bolt
2	Coulter Blade - 18"	G2-370-18	7	5/8" Lock Washer
	Coulter Blade - 20"	G2-370-20	8	5/8" Hex Nut
	Coulter Blade - 22"	G2-370-22	9	1/2" x 1 1/2" Hex Head Bolt
3	Coulter Clamp	G2-375	10	1/2" Lock Washer
4	Coulter Side - 18"	G2-380-18	11	1/2" Hex Nut
	Coulter Side - 20"	G2-380-22	12	7/16"-20 4 1/2" Hex Head Bolt
	Coulter Side - 22"	G2-380-22	13	7/16" Lock Washer (Not Shown)
5	Coulter Blade Hub	see p. 2-1	14	7/16" Hex Nut (Not Shown)
5,9-14	Coulter Hub Assembly	G2-379		
2,5,9-14	Coulter Blade and Hub Assembly	18" G2-390-18 20" G2-390-20 22" G2-390-22		
2-5,9-14	Coulter Assembly	18" G2-100-18 20" G2-100-20 22" G2-100-22		

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Parts List for GA-300

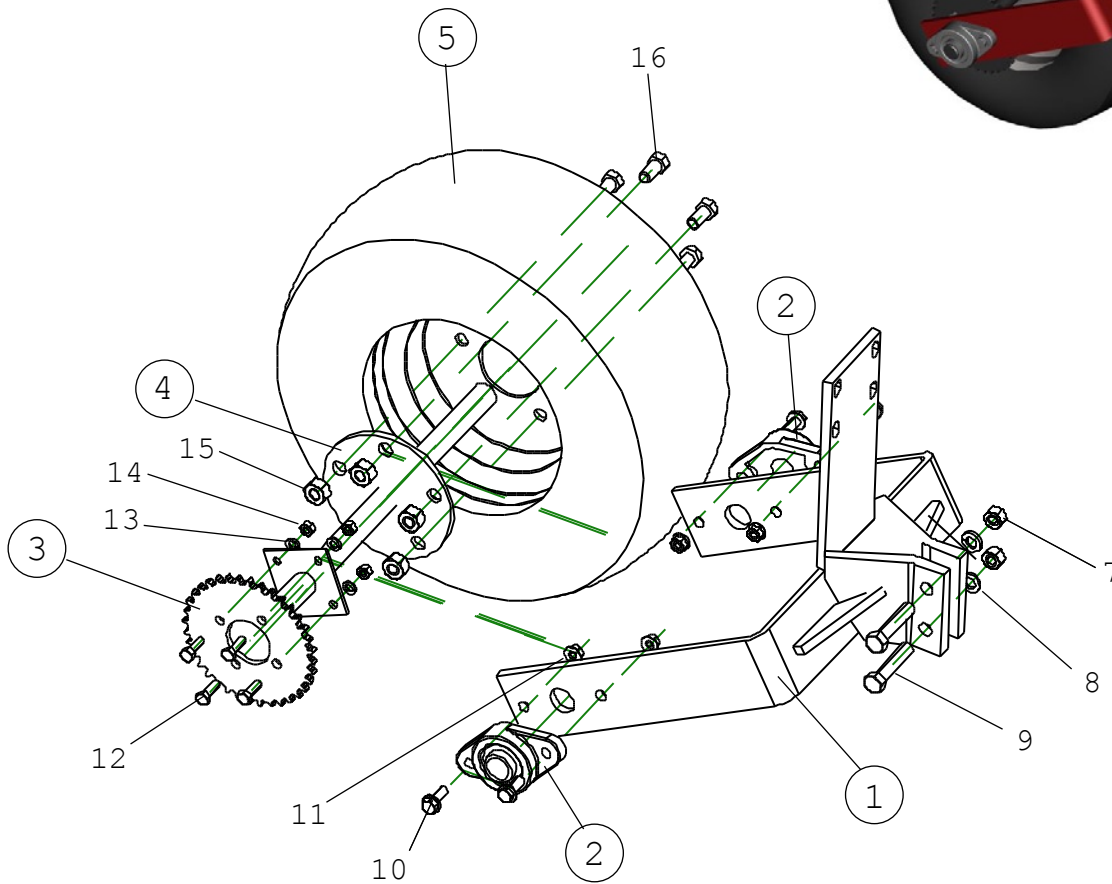
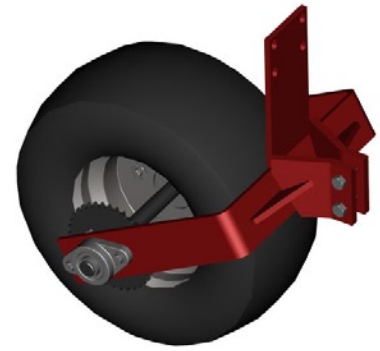
Seeder Assembly



Ref #	Name	Part #
1	Seeder Casting	G4-200
2	Seeder Axle	G4-201
3	Drive Gear	G4-203
4	Tripper	G4-269
5	Seeder Slide - 5/8" Hole for 7/8" Hole use G4-208A	G4-208
6	Seeder Slide Spring	G4-215
7	Spring Holder Clip	G4-278
8	Poison Guide Plate	G4-286
9	Seeder Box	G4-230P
10	Seeder Box Lid	G4-234P
12	Lid Retaining Strap (Not Shown)	G4-233P
10-12	Seeder Box Lid Assembly	G4-231P

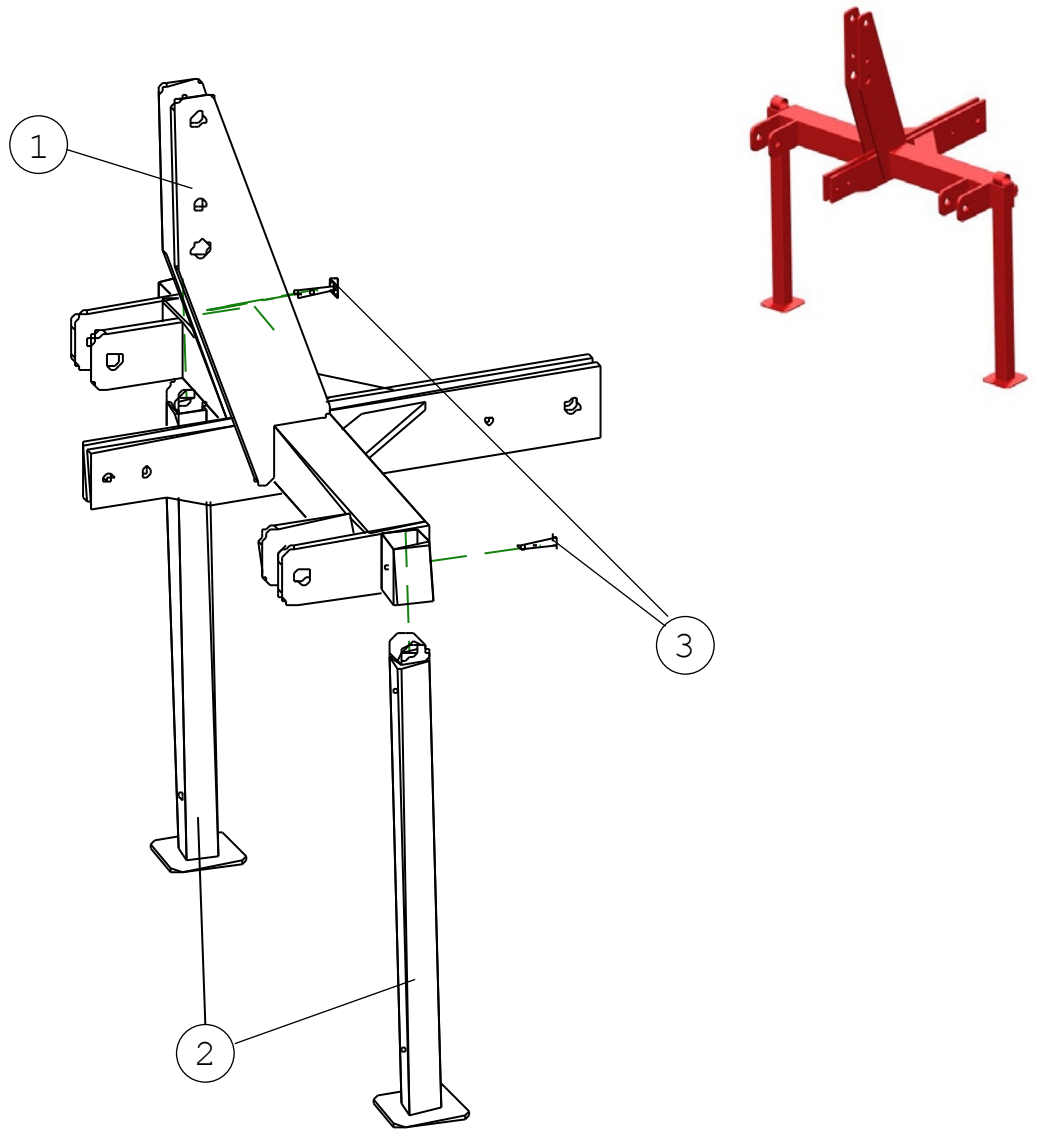
Ref #	Name	Part #
13	Drain Cap	G4-221P
14	Plastic Hose	G4-122
9-13,17	Seeder Box Assembly	G4-235P
1-20	Seeder Assembly	G4-100P

Ref #	Description
15	3/8"-16 x 1" Wislock Hex Bolt
16	3/8"-16 Wislock Hex Nut
17	#8 1/2" Sheet Metal Screw
18	9/16" of 3/16" Square Key Stock
19	#10 Internal Locking Washer
20	#10-24 1/2" Allen Screw (Use LocTite)



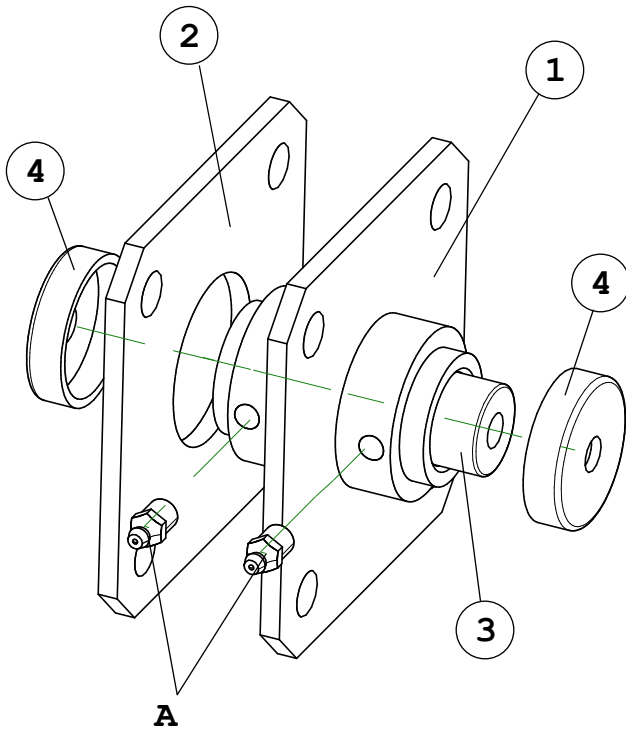
Ref #	Name	Part #	Ref #	Description
1	Packer Wheel Bracket	G8-305	7	1/2" Hex Nut
2	Packer Wheel Bearing	G8-303	8	1/2" Lock Washer
3	Large Sprocket	G8-306	9	1/2" x 2 1/2" Hex Head Bolt
4	Packer Wheel Inner Axle	G8-302	10	3/8" x 1" Wislock Hex Head Bolt
5	Packer Wheel (Tire and Rim) - 18.5 x 8.5 - 8 LRC	G8-301	11	3/8" Wislock Hex Nut
6	Chain (Not Shown)	G8-304	12	5/16" x 1" Hex Head Bolt
1-6, 10-16	Packer Wheel Assembly	G8-300	13	5/16" Lock Washer
			14	5/16" Hex Nut
			15	Wheel Nut
			16	1/2" UNF x 1" Hex Head Bolt

All hardware listed is coarse thread (UNC) and Grade 5 or better unless otherwise noted.



Ref #	Name	Part #	Ref #	Description
1	Frame	G8-501		
2	Leg	G8-502		
3	Snap Pin	G7-526		

Coulter Blade Hub



Label	Name	Part #
1	Blade Flange w/ Hub	G2-381
2	Blade Flange	G2-382
3	Inner Bearing	G2-383
4	Bearing Cap	G2-384
A	1/4"-28 SAE-LT Grease Fitting	N/A*

*Not Available Separately

LIMITED WARRANTY TERMS

Elston Manufacturing, Inc. offers a one (1) year, non-transferable, Limited Warranty against specified defects as set forth below for Elston Manufacturing, Inc. product lines from the date of purchase through proof of purchase by providing original receipt.

This Limited Warranty specifically excludes normal wear and tear of products and is provided solely under the conditions that the product has been properly installed, operated and maintained in accordance with all applicable instructions. Proper installation instructions, or operating manuals, are provided with each product and operating condition. Travel, diagnostic cost, labor, transportation and any and all such costs related to repairing a defective product will be the responsibility of the owner. This warranty is extended only to the original owner of any equipment, the end user.

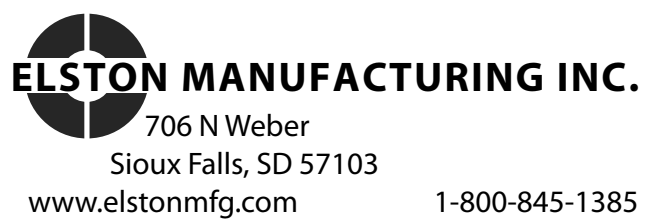
Elston Manufacturing, Inc.'s sole obligation under this Limited Warranty is to, in its sole and absolute discretion, either repair, modify, or replace (i.e. correct), Elston Manufacturing, Inc.'s products subject to this Limited Warranty. The allegedly defective products must be returned to Elston Manufacturing Inc. or an authorized service center freight paid by buyer. After confirmation by Elston Manufacturing, Inc. that a defect does exist in the product that is covered under this Limited Warranty then Elston Manufacturing, Inc. shall, in its sole and absolute discretion, either repair, modify or replace the product(s) and return the product(s) to the owner freight paid by Elston Manufacturing, Inc.

Elston Manufacturing, Inc. products received by Elston Manufacturing, Inc. within one (1) year from the original sale date to customer and found to be defective as referenced above will be corrected as referenced in the previous paragraph at no charge for parts (provided by original factory) or labor but will include freight paid by buyer. Failure to use original factory parts voids this warranty. Elston Manufacturing, Inc. products received by Elston Manufacturing, Inc. after one (1) year from original shipment date to customer will be corrected as foresaid for a charge of the then-current sale price of parts and labor with freight paid by buyer. Exception: Any parts to be found defective at any time that come under a recall status from providing manufacturer, will be covered under the terms and conditions of the recall status provided by manufacturer.

THIS LIMITED WARRANTY BY ELSTON MANUFACTURING, INC. IS IN LIEU OF ANY AND ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION TOTHE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. NO ONE IS AUTHORIZED BY ELSTON MANUFACTURING, INC. TO EXTEND OR ALTER THE TERMS OF THIS LIMITED WARRANTY. ELSTON MANUFACTURING, INC. ASSUMES NO LIABILITY FOR LOSS OF USE OR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, CONSEQUENTIAL OR OTHER DAMAGES OF ANY KIND IN RESPECT TO THE USE OF THE ELSTON MANUFACTURING, INC EQUIPMENT.

Accessory items furnished by Elston Manufacturing, Inc. are covered by a Limited Warranty for a period of one (1) year from date of original sale, subject to the conditions, limitations, and disclaimers stated above, for replacement of defective materials, provided such items are returned freight paid by buyer to Elston Manufacturing, Inc. and are determined by Elston Manufacturing, Inc. to be defective in its sole and absolute discretion.

This Limited Warranty shall not apply to any piece of equipment, parts or accessories repaired by anyone other than Elston Manufacturing, Inc. personnel, or its authorized service organizations.



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