

Revision D
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ELSTON MANUFACTURING GA-700 OWNERS MANUAL

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1 Safety Information

Operating this Gopher Getter safely is essentially no different from operating a tractor safely. 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. Don't depend on this paper to tell you how to do it.

In all probability, you have operated a tractor much more than I, so I won't insult your intelligence with a bunch of obvious warnings. That said, I want to leave you with a couple of things I believe are worth repeating.

Operating for years without an accident is not the same as operating safely. - 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. - This is certainly one of the areas where hindsight is 20/20. 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.

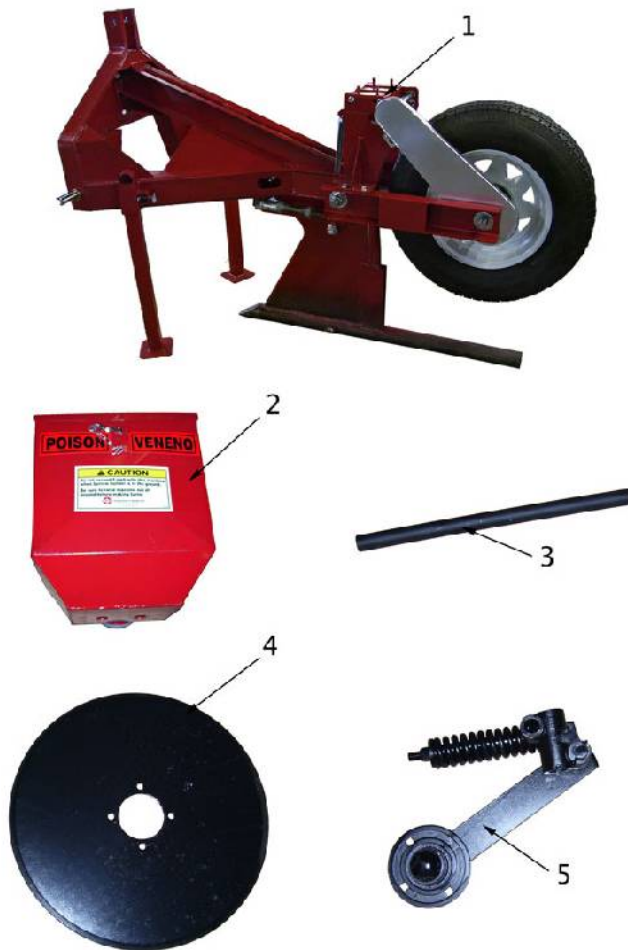
It will apply approximately one and a half pounds per acre of Elston gopher getter bait when the burrows are spaced 20 feet apart. When used with rolled oats, the application rate will be slightly less than one pound per acre.

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

3 Assembly Instructions

Verify Parts

Before beginning assembly, please verify that all parts were shipped with the Gopher Getter. The Gopher Getter is shipped from the factory in the 5 pieces shown below.



Label	Description
1	GA-700 Base Assembly
2	Bait Box
3	Coulter Shank
4	Coulter Blade
5	Coulter Arm

Illustration 1: Parts of GA-700 as Shipped

Inside the bait box you will find a parts kit that includes the following parts.



Illustration 2: Parts Kit

Label	Qty	Description
A	2	Coulter Shank Clamps (G7-208)
B	2	3/8" UNF Bolt for G7-208
C	4	2 1/2" 1/2"-13 Hex Head Bolts
D	4	1/2" Split Ring Lock Washers
E	4	1/2" Flat Washers
F	4	1/2"-13 Hex Nuts
G	2	Seeder Slides w/ Pin (G7-413)
H	4	Seeder Slide Springs (G7-429)
I	1	Retaining Strap for Coulter Bearing Cap
J	1	Parts Bag for Coulter Assembly (4 carriage bolts, 4 lock washers, 4 nuts, 1 square head bolt, 1 roll pin, and 1 cotter pin)
K	1	Coulter Shank Casting
L	4	3/8" Serrated Flanged Hex Nuts

Table 1: Contents of Parts Kit

Begin Assembly

Assembly of the GA700 is straightforward and all of the parts attach to the base assembly shown in illustration 1. If after reading the assembly steps below, you have any questions please refer to the parts list in the back of this manual. It presents much of the information below in a more visual way you may find easier to understand.

1. Install the legs to the base assembly if not already installed.

If they are already installed slide and lock them into position to hold the gopher getter upright. When the legs are in position, the GA-700 will look as pictured in illustration 3.



Illustration 3: GA-700 Base Assembly with Legs

2. Attach the seeder slides and bait box to the base assembly.

From the parts package, you will need the 2 seeder slides (labeled L in Illustration 2), 4 springs (labeled K), and 4 serrated, flanged hex nuts (labeled J). You will also need the bait box.

- a) Install the four springs to the attachment points on the seeder assembly. These attachment points are found just behind the clear hoses that deliver the bait to the seeder tube.

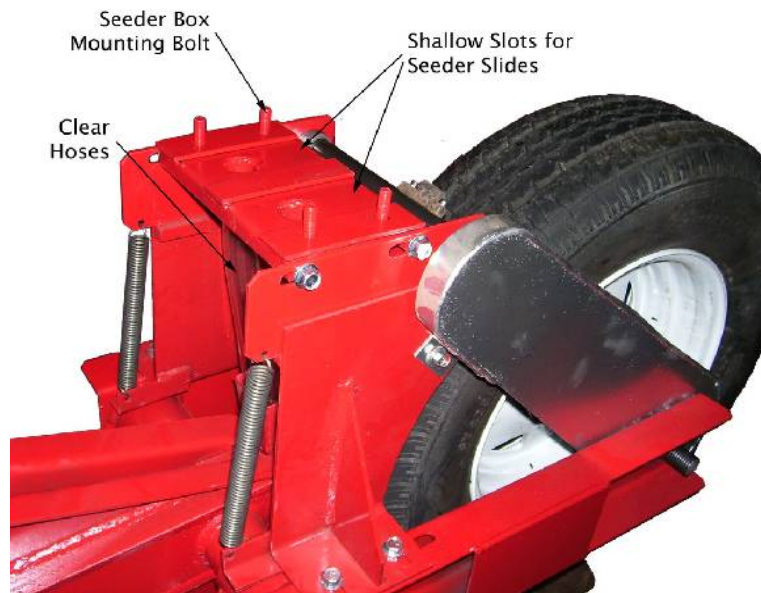


Illustration 4: Seeder Assembly Area on GA-700

- b) Next place the seeder slides in the shallow slots they run in on the seeder assembly (see illustration 4). The side of the seeder slide with the larger flange and the two holes should be closer to the front of the machine.
- c) After that, place the bait box on top of seeder slides. The bait box should face with the clear viewing windows facing toward the front of the machine as shown in illustration 5 and be secured with the four hex nuts.



Illustration 5: Inside of Bait Box

- d) Attach the other side of the springs installed in step 2a to the holes on the seeder slides. Once the step is done, the unit should look like it does in illustration 6 below.



Illustration 6: Finished Seeder Assembly

3. Attach the coulter assembly to the frame

For this step you will need the coulter shank, the coulter blade, the coulter arm, the coulter assembly parts bag, and all the remaining parts in the parts bag.

- a) Install the roll pin in the coulter assembly parts bag into the hole on one end of the coulter shank.
- b) Mount the parts that clamp the coulter shank to the frame. You will need the 2 coulter shank clamps, the 2 square head bolts, and the 4 bolts, washers, lock washers, and nuts. These parts should be assembled as shown in illustration 8.
- c) Slide the coulter shank into position as shown in Illustration 8. Clamp the coulter



Illustration 7: Assembled Coulter Shank

shank in place by tightening each bolts a little at a time until the coulter shank is secured in place.

- d) Attach the coultter arm to the coultter shank using the coultter clamp to hold it in place. Add the cotter pin to the hole in the bottom of the coultter shank. This pin will retain the coultter arm if the bolt on the coultter clamp casting becomes loose.

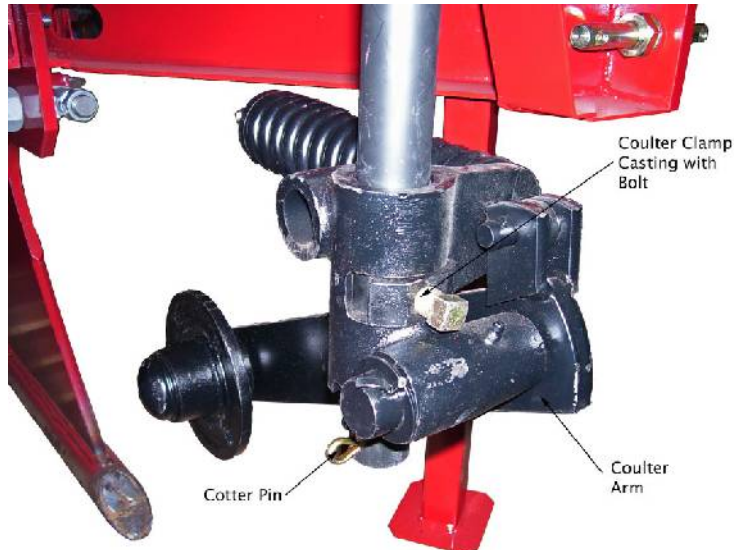


Illustration 8: Coultter Arm Mounted on Coultter Shank

- e) Bolt the coultter blade to the coultter arm. Adjust the height of the coultter blade so the bottom of the blade is aligned with the top of the torpedo tube. If the center line of the coultter blade is not aligned with the center of the knife, loosen the coultter shank clamps and reposition them to move them into alignment. Position the coultter clamp so the coultter is free to swing around an arc centered on the knife and torpedo tube. Assembly of the coultter assembly is now complete and should look as pictured below.

Your GA-700 Gopher Getter is now assembled. Refer to the next chapter for additional tips and instructions for adjusting the machine before its first use.



Illustration 9: Completed Coultter Assembly

4 Using Your Gopher Getter

Attaching Gopher Getter to Tractor

This machine was designed to attach to a category one or category two 3-point hitch. The category two hitch pins are located on the outside of the 3-point framework and the category one hitch pins are located on the inside. The top link or the 3-point will need to be connected and adjusted so the torpedo tube operates at a slight slope when being pulled through the ground at depth with the front point being slightly lower than the back of the tube.

Setting Up Seeder Assembly

This machine is equipped with a dual bait seeder mechanism which allows two different baits to be deposited at the same time. When you open the lid to the bait box, you will see a divider plate in the center of the box. To deposit two different baits, simply fill one half of the bait box with one bait and the other half with the other choice of bait. The seeder mechanism automatically alternates from side to side to prevent the two baits from being dropped on top of each other. If you'd like to only use one type of bait simply fill both sides of the bait box or just remove the divider plate.

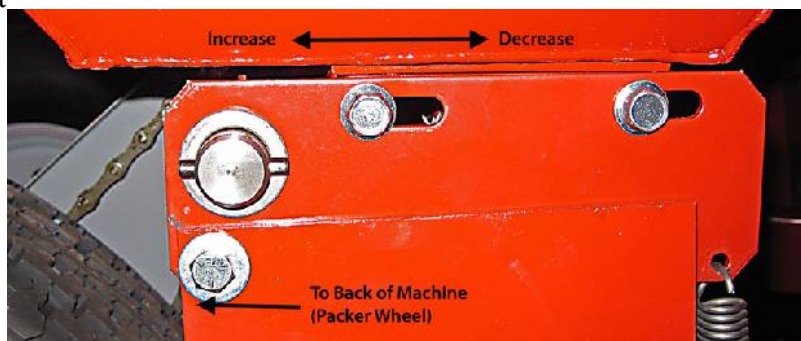
If applying Elston gopher bait, no spacer plate should be used. If other types of bait are used, first check that the bait fits in the slot for the seeder slide (between the seeder base and the seeder box). If it does not, add one or two spacer plates until the gap is large enough to fit most pieces of the bait. If this is not done, the bait will be significantly ground up and some parts in the seeder assembly wear much quicker than normal.

Adjusting Rate Bait is Deposited

The bait application rate of the GA700 is adjusted by moving the bait box and seeder slide base backwards and forwards. One of the trippers located on the seeder drive axle may also be removed to allow even less bait

to be dropped. The seeder base is attached to its mounting bracket with 4 bolts and sliding it backwards (toward the packer wheel) will increase the bait application rate. When applying Elston gopher bait, it should be adjusted so that the maximum opening of the hole in the seeder slide is 1/2" (approximately 3/4 of the way toward the back)

for an application rate of approximately 2 pounds per acre at 20 feet between passes. For other types of bait, consult with the bait dealer for recommended setup. If they do not have any recommendations, start with a maximum opening in the seeder slide of approximately 1/2" and the number of spacer plates recommended in the section above and measure the actual



application rate. Adjust the application rate by shifting the seeder base backward and forwards and increase it by adding spacer plates can also be added (up to a total of 3). If you are still unable to achieve the application rate you need please contact the factory.

Adjusting Depth Bait is Deposited

The packer wheel determines how deep the torpedo tube or burrow builder travels through the ground. The depth of the torpedo tube should match the depth of the gophers natural burrows in your area. This can be determined by locating and digging up one of their main runways to see how deep they are actively working and adjusting the packer wheel accordingly. It is not necessary that the depth of the torpedo tube be exact; only that it is close enough to intercept the gophers main runways. The depth adjustments are made with the two threaded rods located on either side of the knife assembly. When standing behind the machine and facing the machine, the rod on the right side locks the wheel in place once the decided position is set and the rod on the left side adjusts the packer wheel. To adjust the wheel, loosen the two nuts on both rods that lock the adjustments in place. Using a wrench, turn the rod on the left side until the wheel is adjusted so the torpedo tube will build the burrow at the correct depth. When the wheel is set in place, spin the two nuts back in position and tighten to lock the wheel in place.

Adjusting Depth of Coulter

This machine is provided with a spring-loaded coulter assembly mounted on a straight shaft to allow for a wide range of adjustments in depth. Generally, the coulter should be set just deep enough so that the blade cuts through the debris on the surface and the major roots below the surface so that the knife passes cleanly through the soil. Avoid adjusting bottom of the coulter lower than the top of the torpedo tube as this often makes it very difficult to get the machine to full depth. In areas such as pasture, a depth of approximately 4 to 5 inches is recommended. In alfalfa, adjust the coulter as deep as possible while keeping the hub of the coulter an 1" or so above the soil and the bottom edge of the coulter even with or above the top of the torpedo tube. Depending on your exact conditions, the depth may need to be varied somewhat from these recommendations.

To adjust the depth of the coulter blade, loosen the bolt on the coulter clamp and slide the coulter up or down on the coulter shank. Lock the coulter clamp when the desired position is found. For larger adjustments, the bolts that hold the coulter shank to the front of the machine may also be loosened and the shank slid up or down for further adjustments. Tighten the square headed bolts just tight enough to hold the shank in normal operation (no more than 40 ft-lbf). Over-tightening these bolts will likely cause one of them to fail when the coulter springs back after an impact with a rock or other obstruction.

Operating Instructions

Important: The advice and tips in this manual are general since they must work 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 use gopher getters.

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. 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). To limit damage from erosion, avoid making burrows straight down the slope of the hill. The gopher getter will apply approximately two pounds per acre of Elston Gopher Getter bait when the burrows are spaced 20 to 25 feet apart. When measured over a whole field your application rate will be less since it is not necessary to cover the whole field.

You have certain types of soil or low soil moisture, the Gopher Getter may have trouble getting to full depth (where the packer wheel will turn consistently). 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 soil moisture is relatively high and the groove on the bottom of the torpedo tube is plugging with soil, eventually causing the tubing dropping bait to plug, the torpedo tube is probably too level. Adjusting the angle of the frame so that the torpedo tube slopes downward into the soil slightly more (one or two degrees) usually corrects the problem.

Operating Tips

- Never turn or back up with the machine in the ground. This will damage the unit.
- Always replace the shear bolt with an identical grade 2 bolt. A higher grade bolt like a grade 5 will greatly increase the risk of expensive damage to the frame when you hit a large obstruction and result in an elongated bolt hole.
- Avoid over-tightening the shear bolt. If the bolt clamps the frame to the knife too firmly, the shear bolt will not work correctly and the frame will likely be damaged when hitting a large obstruction. The shear bolt should be tightened so there is a very slight amount of play between the knife and the frame.
- 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 difficult 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.

Additional Information

If you are having trouble setting up or operating your Gopher Getter, please contact the dealer where you purchased your GA-700. If you are unable to contact them or they were unable to answer your questions, please contact Elston Manufacturing at 1-800-845-1385 or refer to our website at www.elstonmfg.com .

5 Maintenance

Every use:

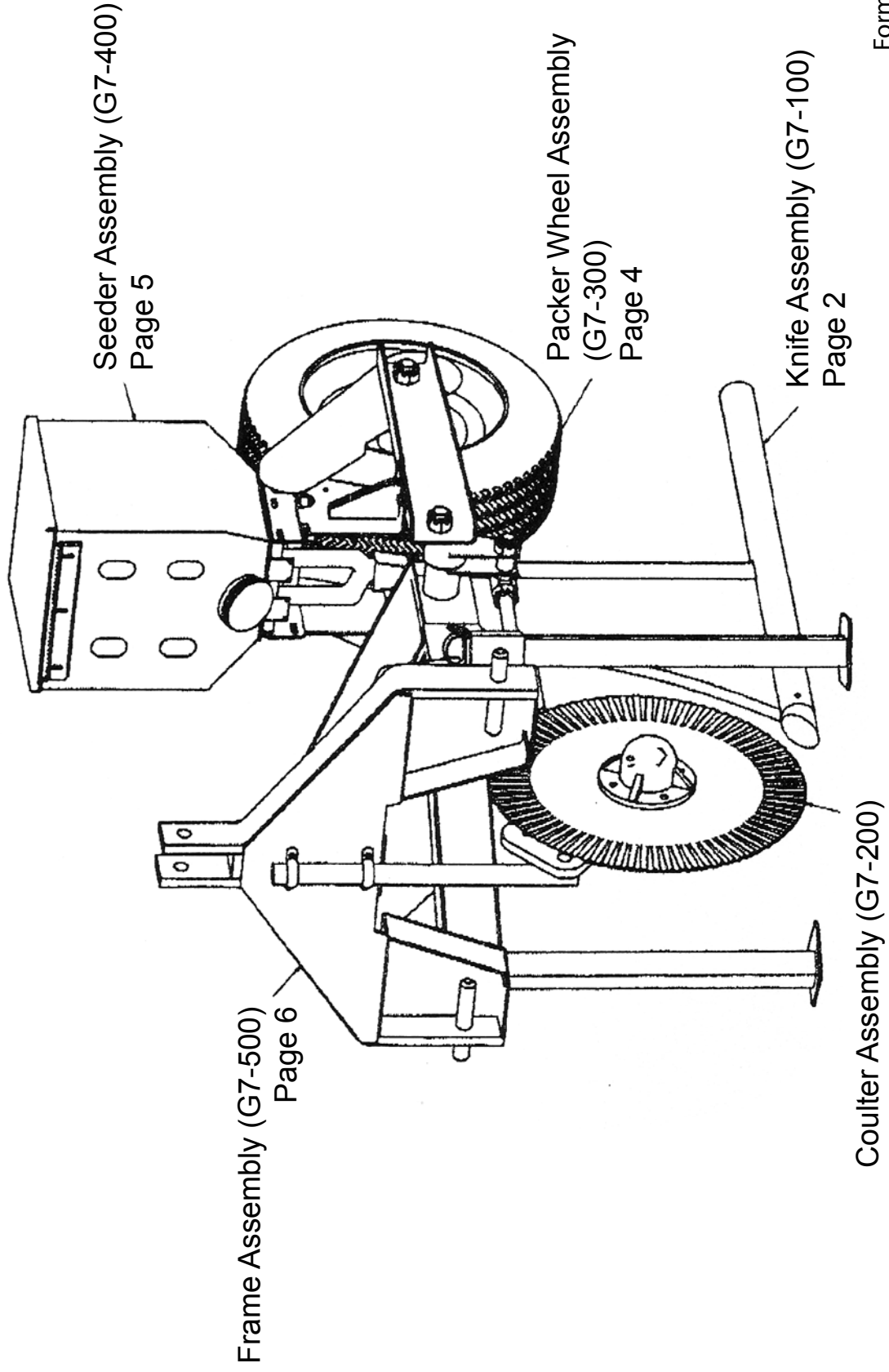
Inspect torpedo tube/point for excessive wear or damage

Inspect shear bolt for damage, replace if necessary

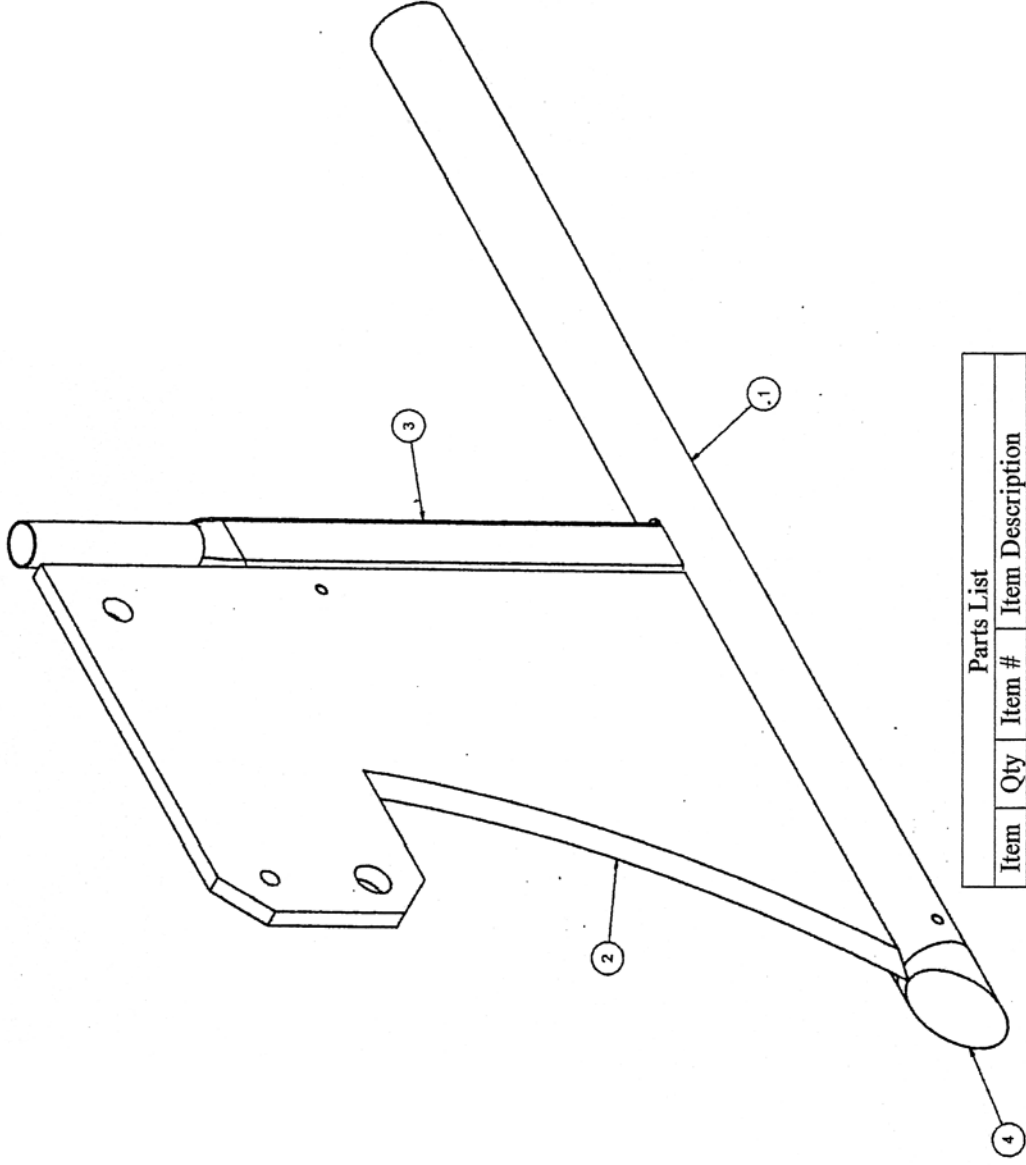
Every season or 200 lbs of bait:

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

Parts List for GA-700 Gopher Getter

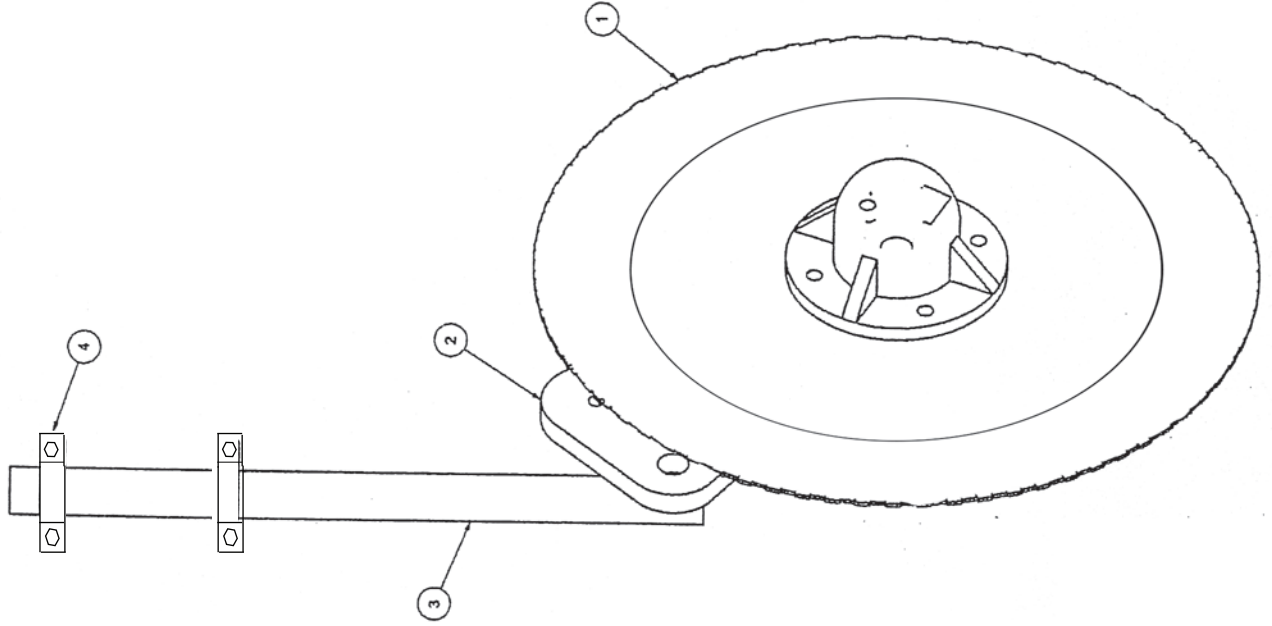


G7-100 Knife Assembly



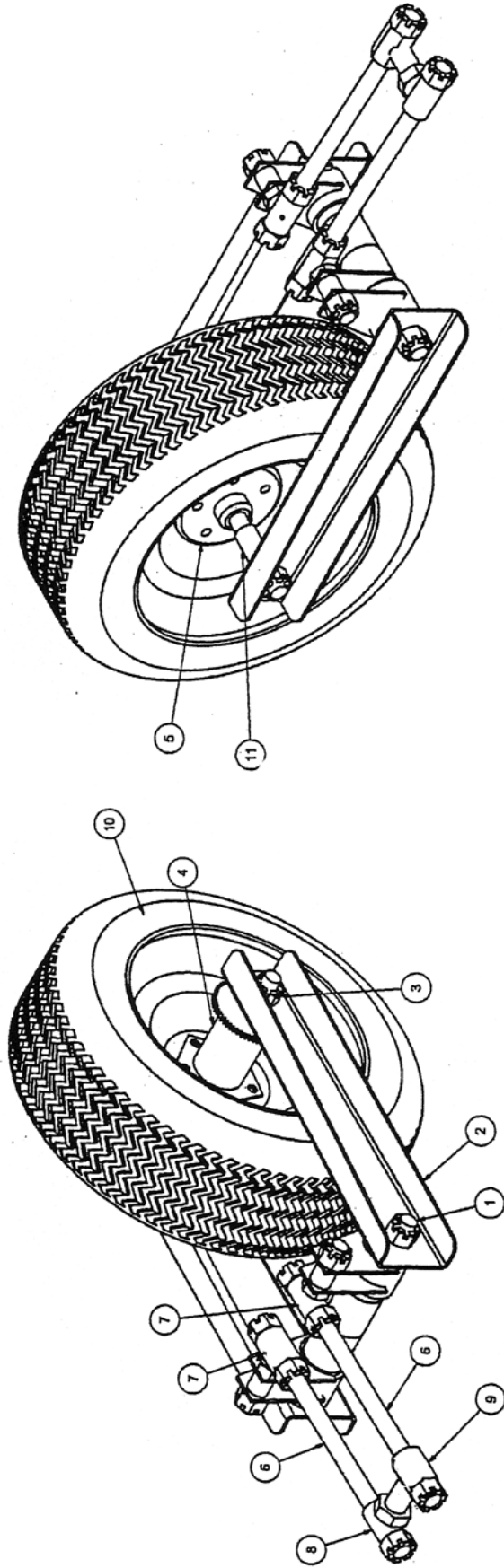
Parts List		
Item	Qty	Item Description
1	1	G7-102 Torpedo Tube w/Liner
2	1	G7-103 Knife
3	1	G7-104 Seeder Tube
4	1	G1-105 Torpedo Point

G7-200 Coulter Assembly



Parts List		
Item	Qty	Item Description
1	1	G7-203 Coulter Blade
2	1	G7-201 Single Arm Coulter Component Parts: G7-202 Coulter Clamp G7-201-15 Bearing Cap (call for additional parts)
3	1	G7-204 Straight Coulter Shank
4	2	G7-208 Coulter Shank Clamp

G7-300 Packer Wheel Assembly

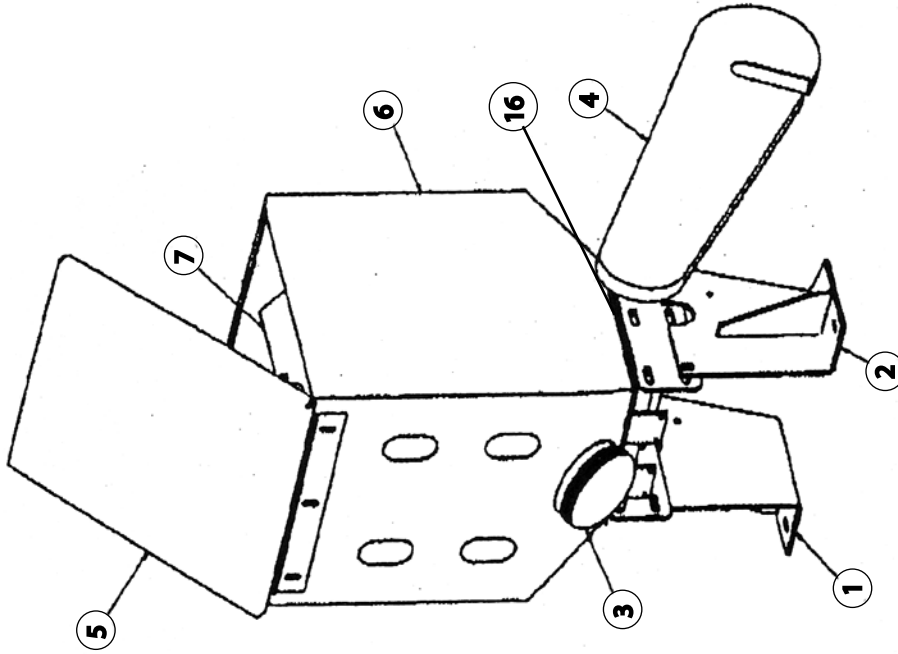


Left View

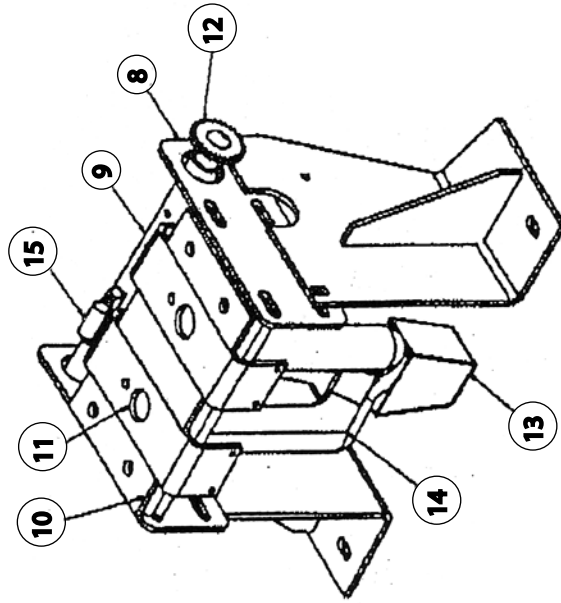
Right View

Parts List			
Item	Qty	Item #	Item Description
1	2	G7-304	Swing Arm & Packer Wheel Axle
2	1 each	G7-301	Packer Wheel Swing Arm, Left & Right
3	1	G7-310L	Packer Wheel Hub Spacer, Left
4	1	G7-314	Sprocket Assembly
5	1	G7-317	Bearing and Hub Assembly
6	2	G7-311	Packer Wheel Adjustment Rod
7	2	G7-312	Lift Arm Link
8	1	G7-309	Lift Arm Connecting Bolt Assembly
9	1	G7-308	Lift Arm Connecting Nut Assembly
10	1	G7-318	Tire & Wheel Assembly
11	1	G7-310R	Packer Wheel Hub Spacer, Right

G7-400 Seeder Assembly



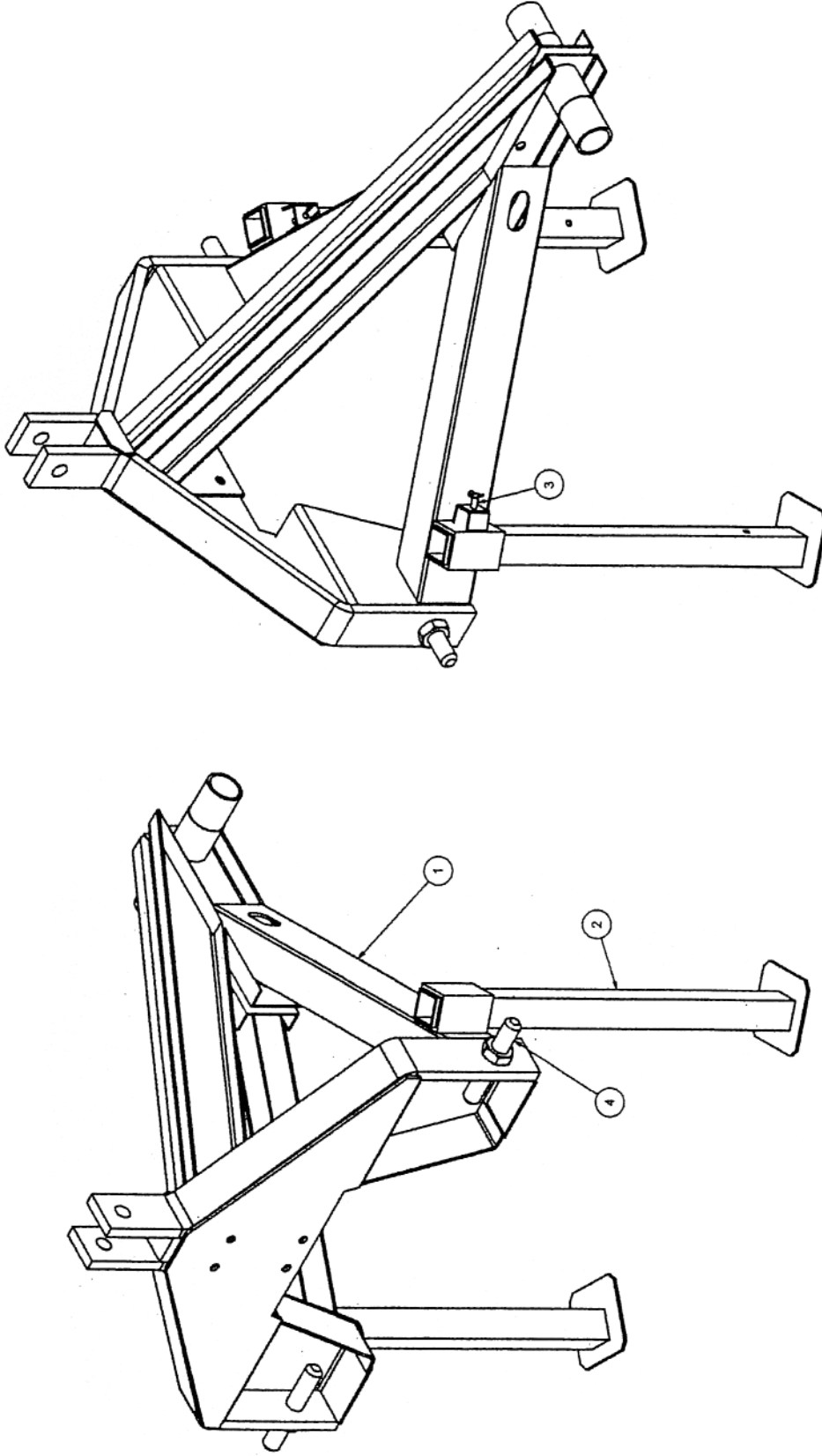
Parts List			
Item	Qty	Item #	Item Description
1	1	G7-417	Seeder Assem. Mfg. Brkt., Right
2	1	G7-417	Seeder Assem. Mfg. Brkt., Left
3	1	G7-425	Cap
4	1	G7-411	Chain Guard
5	1	G7-407	Bait Box Lid
6	1	Call	Bait Box Assembly
7	1	G7-406	Bait Box Divider
	1	G7-433	Seeder Box Spring



Assy w/o Bait Box

Parts List			
Item	Qty	Item #	Item Description
8	2	G7-416	Slide Adjustment Plate
9	1	G7-419	Drive Axle
10	1	G7-414	Seeder Assem Base
11	2	G7-413	Seeder Slide and Pin
12	1	G7-428	Drive Gear
13	1	G7-423	Seeder Tube Inlet Cap
14	2	G7-430	Hose
15	2	G7-418	Tripper
	2	G7-429	Seeder Slide Spring
16	2	G7-408A	Bait Spacer Plate

G7-500 Frame Assembly



Front View

Parts List		
Item	Qty	Item Description
1	1	G7-500 Frame Assembly
2	2	G7-517 Leg Stand
3	2	G7-515 Leg Lock Pin
4	2	G7-520 3-point Pin

Rear View

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.

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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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