

Great Plains



30' 3-SECTION DRILL

SMALL SEEDS ATTACHMENT

OWNER'S MANUAL

Great Plains Manufacturing, Inc.

P.O. Box 218
Assaria, KS 67416
(913)667-4755

123-588M
Effective 7/2/93

7/20/95

Your Great Plains 30' 3-Section Drill Small Seeds Attachment is designed to give you many years of dependable service. This manual has been prepared to instruct you in the safe and efficient operation of this machine. Read and study it thoroughly. Follow all instructions and service procedures carefully.

The parts on your 30' 3-Section Drill Small Seeds Attachment have been specially designed and should only be replaced with genuine Great Plains parts. Therefore; should your drill require replacements parts, purchase them from your Great Plains Dealer.

Space has been provided below for you to record your model number and serial number of your drill. Be sure to bring this information with you to your dealer when ordering parts or attachments for your drill.

The following signal symbol and words should be clearly understood! When seen in this manual or on your equipment, this symbol and words will alert you to the seriousness of a situation. They should not be ignored or taken lightly.



The **SAFETY ALERT SYMBOL** indicates that there is a potential hazard to personal safety involved and extra safety precautions must be taken. When you see this symbol, be alert and carefully read the message that follows it. In addition to design and configuration of equipment; hazard control and accident prevention are dependent upon the awareness, concern, prudence and proper training of personnel involved in the operation, transport, maintenance and storage of equipment.

DANGER: Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. This signal word is limited to the most extreme situations.

WARNING: Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

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

SERIAL NUMBER _____

MODEL NUMBER _____

DATE PURCHASED _____

TABLE OF CONTENTS

| | |
|---|------|
| Introduction | 1-0 |
| Table Of Contents | 1-1 |
| Optional Part Number Chart | 1-2 |
| Nut & Bolt Torquing Chart | 1-2 |
| Drive Shaft Installation Instructions | 1-3 |
| Box and Drive Installation Instructions | 1-4 |
| Mounting Hole Locations | 1-5 |
| Hose Retainer Installation Instructions | 1-7 |
| Seed Rate Adjustments | 1-8 |
| Seed Rate Charts | 1-9 |
| Warranty | 1-10 |

PARTS BOOK

| | |
|--|------|
| Box Assembly | 1-11 |
| Drive Assembly | 1-13 |
| Jackshaft Drive Assembly | 1-15 |
| Press Wheel Hose Retainer Bundle | 1-17 |
| "Y" Tube Hose Mount Bundle | 1-19 |

The Great Plains Small Seeds Attachment option is made available to fit any Great Plains 30' 3-Section Solid Stand Drill. This option can be ordered on a new drill and installed at the factory or can be installed in the field by the dealer or customer.

Before starting to install the Small Seeds Attachment on your Great Plains Drill, check the option kit part number. The correct kit for your drill is listed below.

SMALL SEED ATTACHMENT OPTION KIT PART NUMBERS

| OPTIONS | ROW SPACING | | | | |
|------------------------|-------------|----------|----------|----------|----------|
| | 6" | 7" | 7 1/2" | 8" | 10" |
| Press Wheel Hose Mount | 123-340A | 123-341A | 123-342A | 123-343A | 123-344A |
| Y-Tube Mount | 123-710A | 123-711A | 123-712A | 123-713A | 123-714A |

NUT & BOLT TORQUING CHART

This chart is based on torque requirements in foot pounds for grade 5 bolts.

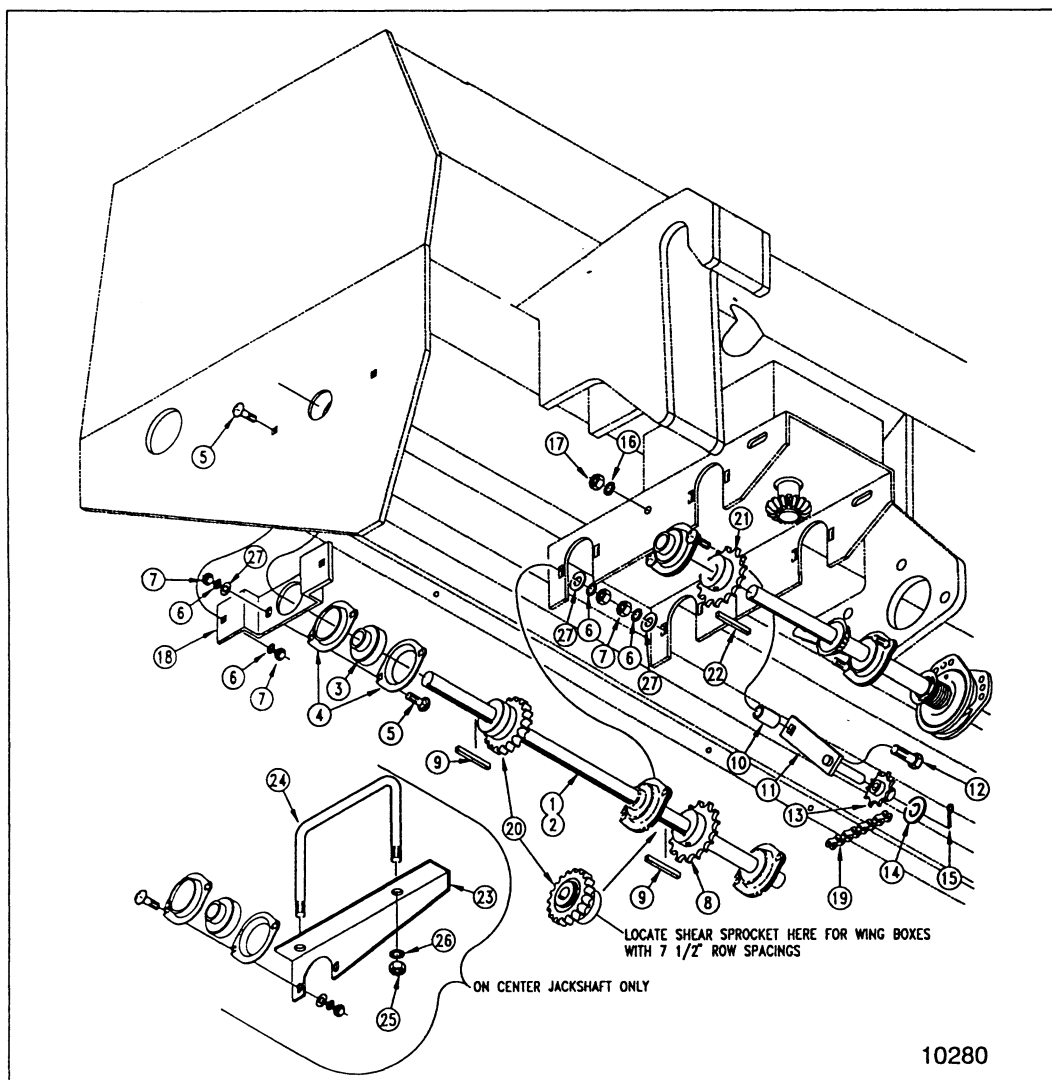
| BOLT DIAMETER | MINIMUM TORQUE | MAXIMUM TORQUE | BOLT DIAMETER | MINIMUM TORQUE | MAXIMUM TORQUE |
|---------------|----------------|----------------|---------------|----------------|----------------|
| 1/4" | 9 | 11 | 3/4" | 270 | 324 |
| 5/16" | 17 | 20 | 7/8" | 400 | 480 |
| 3/8" | 35 | 42 | 1" | 580 | 696 |
| 7/16" | 54 | 64 | 1 1/8" | 800 | 880 |
| 1/2" | 80 | 96 | 1 1/4" | 1120 | 1240 |
| 9/16" | 110 | 132 | 1 3/8" | 1460 | 1680 |
| 5/8" | 150 | 180 | 1 1/2" | 1940 | 2200 |

NOTE: Torque requirements listed above do not apply to self-locking nuts. For self-locking nuts increase the torque requirements listed above by 15%.

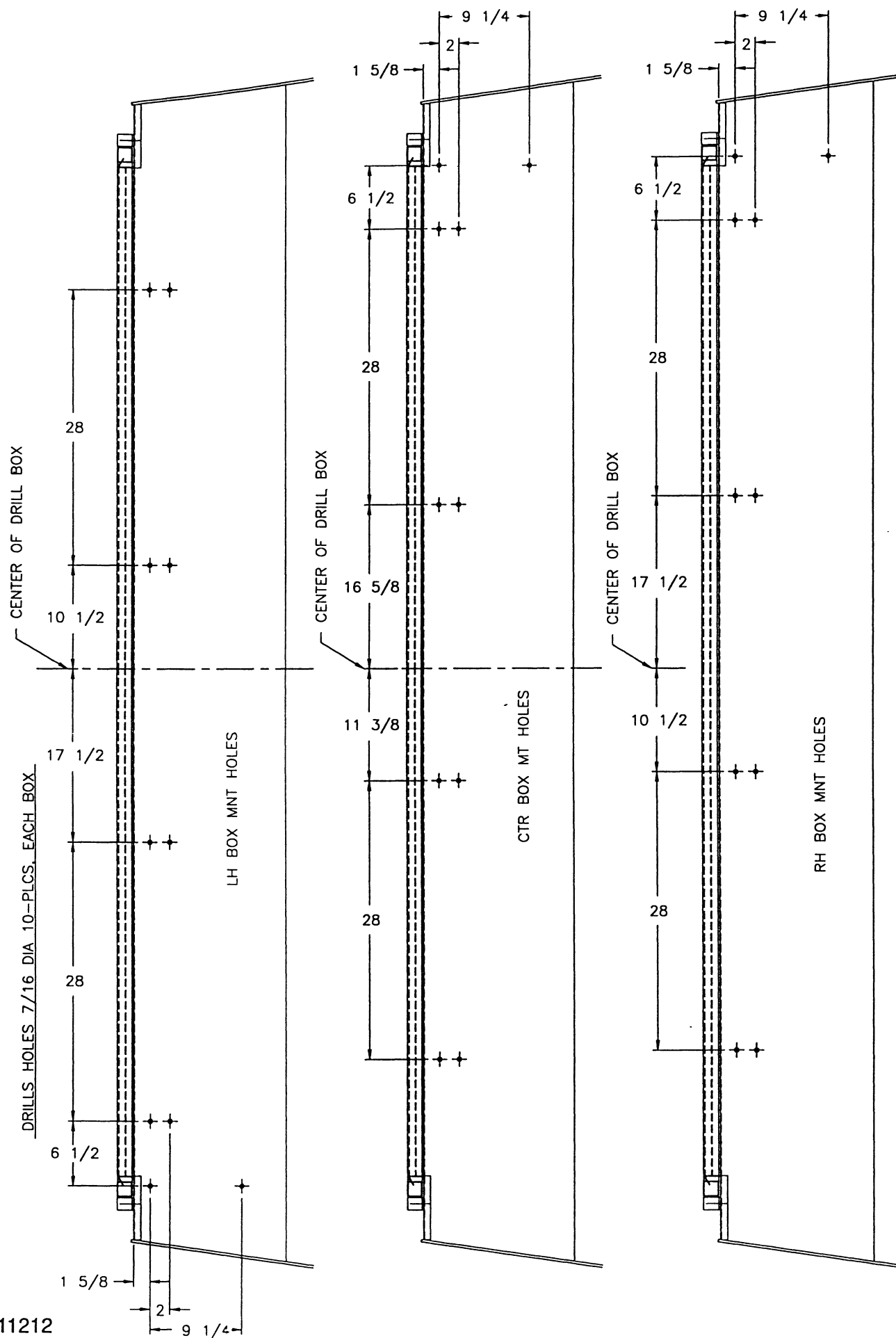
INSTALLATION INSTRUCTIONS FOR 30' 3-SECTION SMALL SEEDS ATTACHMENT DRIVE SHAFT

For the following installation instructions, refer to Fig. 1

The grass seeder drive shafts will need to be installed under the gear box mounting brackets on the front side of the drill boxes. The two shorter shafts, (#2), are mounted on the right and left drill boxes. The longer shaft, (#1), is mounted on the center box. Bolt the 3/4" bearings, (#3), and flangelettes, (#4), to the side plates of the gear box mounts using 5/16" x 1" carriage bolts, (#5), 5/16" flat washers, (#27), 5/16" lock washers, (#6), and 5/16" hex nuts, (#7). Bolt the 3/4" bearings and flangelettes to the jackshaft bearing mounts, (#18), using the same 5/16" hardware. Bolt the jackshaft bearing mounts, (#18), to the inside of box end plate using 5/16" x 1" long carriage bolts, (#5), and hardware. On the center drill box a forth bearing assembly is located between the end plate and gear box mount using the shaft support hanger, (#23), a 3/8" x 6" x 6 3/4" long u-bolt, (#24), 3/8" flat washers, (#27), 3/8" lock washers, (#26), and 3/8" hex nuts, (#25). Locate the 22 tooth drive sprocket, (#8), and 19 tooth shear sprocket, (#20), on the drive shafts as the shafts are installed in the 3/4" bearings, (#3). Note the different locations for the shear sprocket, (#20), when it is installed on the wing boxes with 7 1/2" spacings. Align and level the shaft and bearings in slots and tighten the bearing mounting hardware. Unbolt the end bearing on the gear box drive shaft, loosen the set screws on the bearing and remove it from the shaft. Slide the 12 tooth drive sprocket, (#22), on the shaft and assembly the end bearing back in place. The miter gear that drives the gear box should not be moved, if it is, miter gears will have to be realigned as described in the drills owners manual. Using a straight edge, line up the 12 tooth sprocket, (#21), and the 22 tooth sprocket, (#8), With a 1/4" key, (#22), set screw the 12 tooth sprocket and with a 3/16" key, set screw the 22 tooth sprocket to the drive shafts. Bolt the idler arm, (#11), to the side plate of gear box bracket using a spacer tube, (#10), 1/2" x 1 1/2" long carriage bolt, (#12), 1/2" lock washer, (#16), and 1/2" hex nut, (#17). Slide the idler sprocket, (#13), on the idler arm pin and fasten using a 1/2" flat washer, (#14), and 7/64" x 1" long cotter pin, (#15). Fasten the roller chain, (#19), between the 12 tooth sprocket and 22 tooth sprocket. Rotate idler arm until the idler sprocket has taken the slack out of the chain and tighten the idler arm in place.



Drive Shaft Installation Diagram
Fig. 1



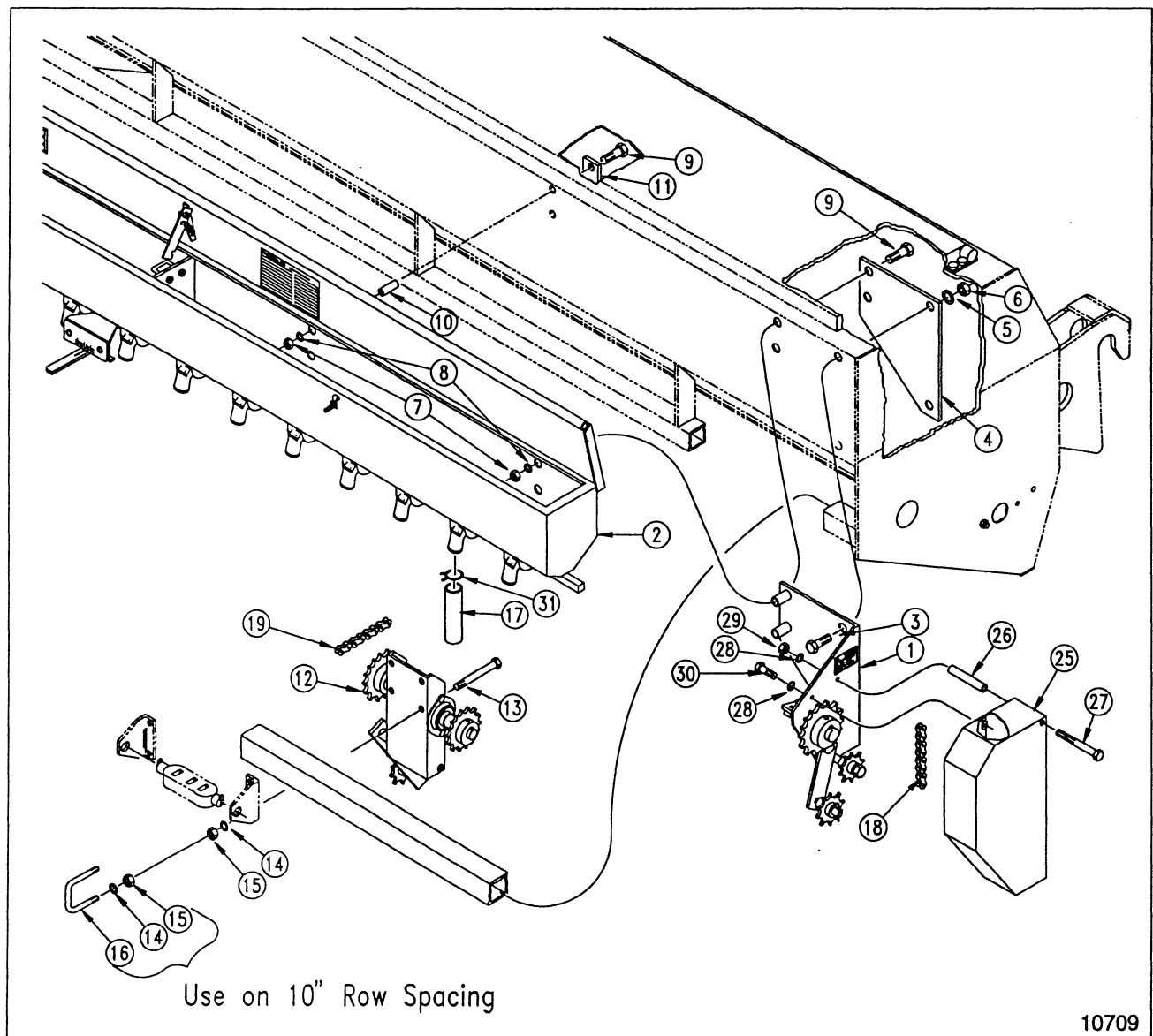
INSTALLATION INSTRUCTIONS FOR 30' 3-SECTION SMALL SEEDS ATTACHMENT BOX AND DRIVE ASSEMBLY

5/20/93

Layout and drill the mounting holes in the back of the grain boxes as shown on page 1-4.

As shown in Fig. 2, bolt the seed box drive bracket assembly, (#1), to the grain box using the 2 5/16" x 1" long bolts, (#3), backing plate, (#4), 5/16" lock washers, (#5), and 5/16" nuts, (#6). When mounting the grass seed box, (#2), on to the grain box, the small cup shaft should fit inside the square bore of the drive sprocket and bearing assembly, (#1). Bolt the grass box to the drive bracket assembly using 5/16" x 2 1/4" long bolts, (#9), 5/16" lock washers, (#8), and 5/16" hex nuts, (#7). Bolt grass seed box to the grain box using the spacer tubes, (#10), backing plates, (#11), and 5/16" x 2 1/4" long bolts, (#9).

Mount the intermediate drive assembly, (#12), to the front side of the spring rod mounting tube in the location shown in Fig. 2. On drills, other than the 10" spacing, remove the u-bolts on the second spring rod casting brackets, from the drive end of the box. Bolt the intermediate drive assembly, (#12), to the 2" square tube and casting brackets using 3/8" x 2" x 2 3/4" long u-bolts, (#16). Connect the grass seed hoses, (#17), to the grass seed cups with hose clamps, (#31).

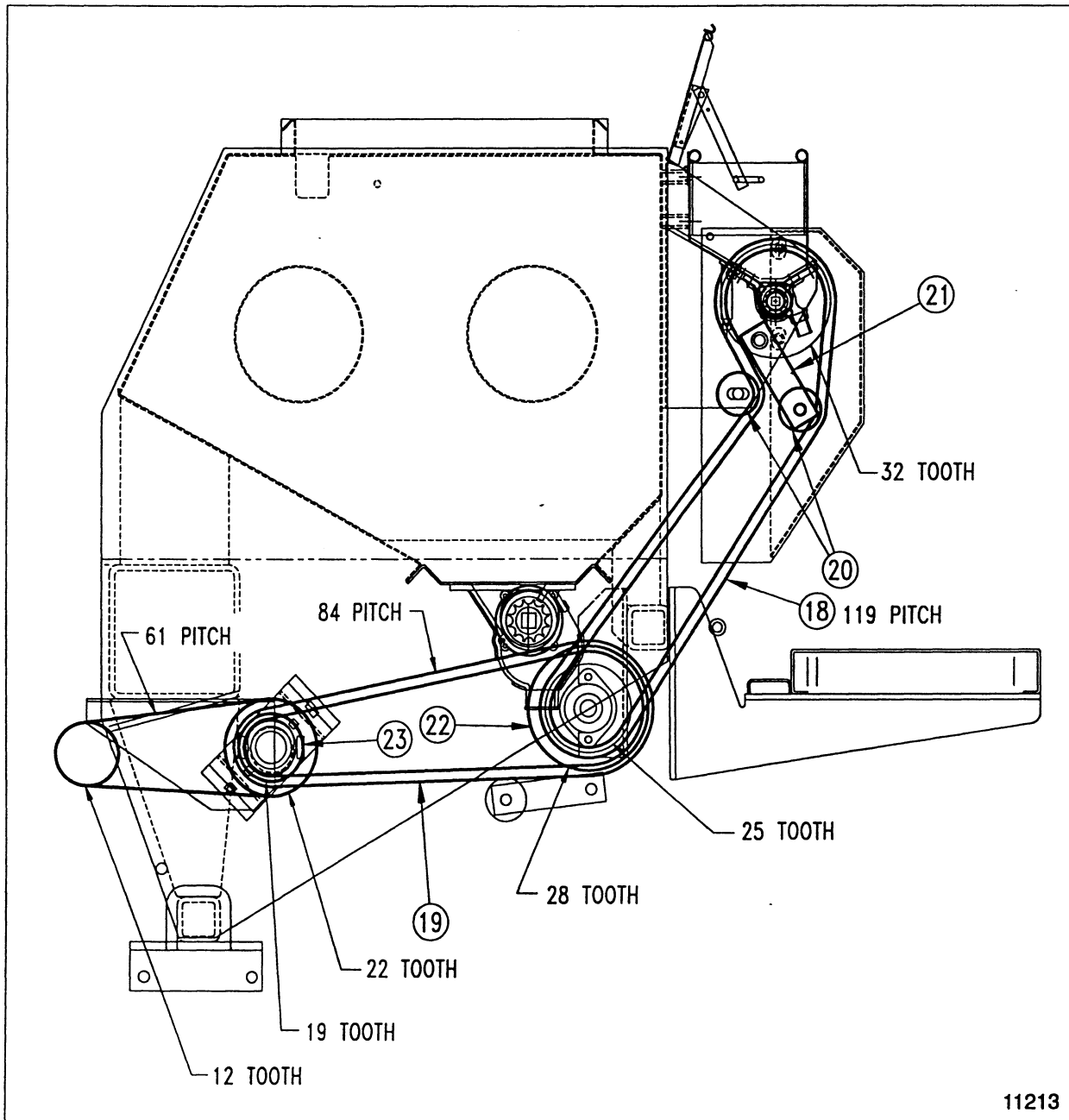


**Box and Drive Installation Diagram
Fig. 2**

For the following instructions refer to Fig.3.

Assemble the roller chain onto the sprockets. The 119 pitch roller chain, (#18), driving the grass seeder boxes should be routed as shown between the two idler sprockets, (#20). Tighten the drive chain with the idler arm, (#21). Align the 28 tooth sprocket, (#22), with the jack shaft shear sprocket, (#23), and set screw the sprocket in place. Connect the 84 pitch roller chain, (#19), between the two sprockets. Rotate the idler arm up to take the slack out of the chain and tighten in place. Do not over tighten roller chains as this will cause wear on sprockets and chains.

Bolt the drive guards, (#25), in place, as shown in Fig. 2, using the spacer tubes, (#26), 5/16" x 4" long bolts, (#27), 5/16" lock washers, (#28), and 5/16" hex nuts, (#29), on the upper corner of the guard. Bolt up the rear side of the guard using 5/16" x 3/4" long bolts, (#30), and 5/16" lock washers, (#28).

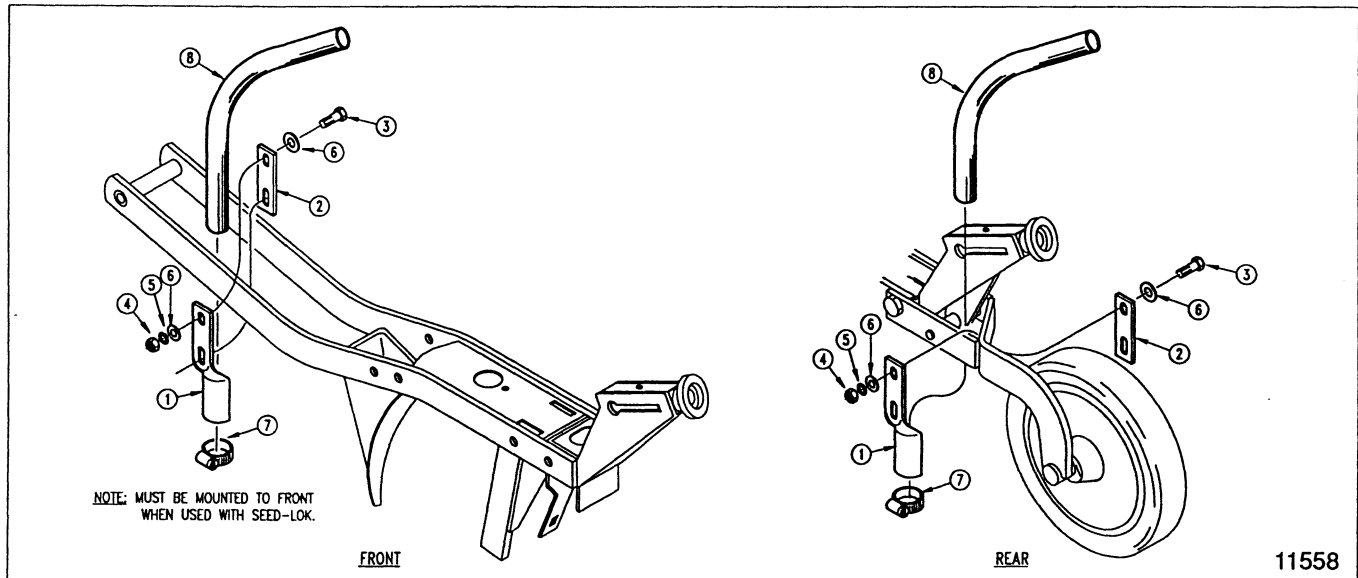


Roller Chain Assembly Diagram
Fig.3

There are two types of hose retainers used to mount the seed hoses to the opener. The first mounts the hose to the opener arm or frame the second connects to the standard seed hose by the means of a "Y" tube.

PRESS WHEEL HOSE MOUNT

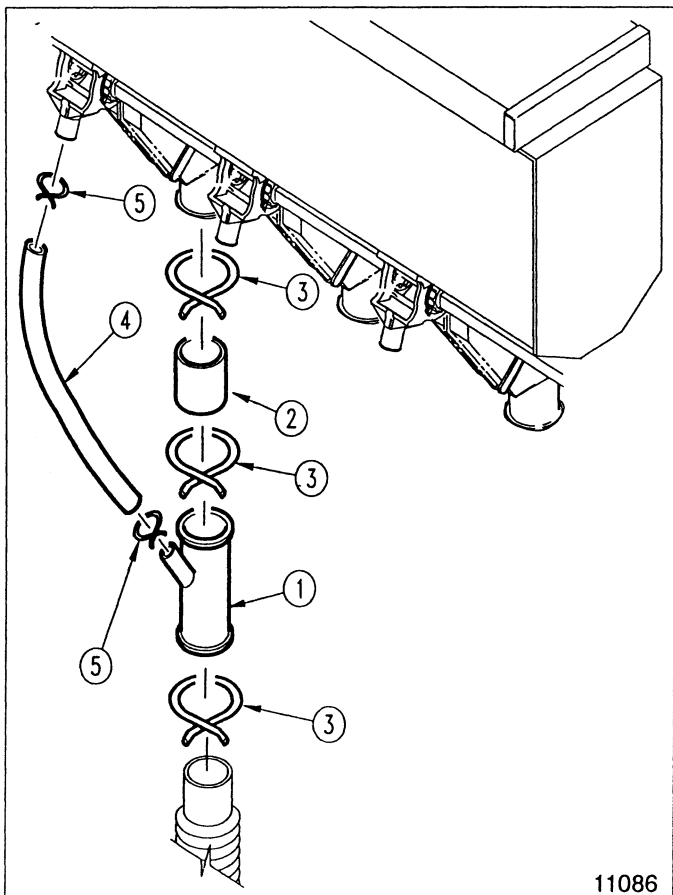
The hose retainers, (#1), may be mounted with the offset to the inside or the outside of the opener as desired. Bolt the hose retainers, (#1), to each press wheel arm or frame, as shown in Fig. 4, with the mount plates, (#2), 1/4" x 1" long bolts, (#3), 1/4" flat washers, (#6), 1/4" lock washers, (#5), and 1/4" hex nuts, (#4). Clamp the seed hoses, (#8), to the retainers with the worm clamps, (#7).



Press Wheel Mount
Fig. 4

"Y" TUBE MOUNT

The "Y" tube is assembled between the seed box feeder cup and the standard seed hose by means of the connector hose, (#2), and the three hose clamps, (#3). The small seeds hose, (#4), is then assembled between the small seeds feeder cup and the "Y" tube, (#1), and held in place with the small hose clamps, (#5).



"Y" Tube Mount
Fig. 5

NOTE: SEEDING RATES WILL VARY GREATLY WITH VARIATIONS IN SIZES OF THE SEEDS. ALTHOUGH THE SEEDING RATES LISTED IN THIS MANUAL ARE BASED ON AN AVERAGE SEED SIZE, WE RECOMMEND THAT YOU TEST AND ADJUST YOUR DRILL USING THE PROCEDURES LISTED BELOW TO HELP INSURE AN ACCURATE SEEDING RATE.

1. Rotate each gauge wheel to see that feed cups and drive are working properly and are free from foreign matter.
2. There are many factors which will affect seeding rates: seed treatment, weight of seed, size of seed, surface condition of seed, and tire configuration, pressure and slippage. Minor adjustments will probably be needed to compensate for above factors.
3. The pounds-per-acre in the seed charts are based on drills having 9.5L x 15" rib implement gauge wheel tires.
4. The large differences in seed size and treatment can cause a wide variation in actual seeding rates. The seed rate charts on the following pages are based on average size seed. This may differ from the seed you are using. Use the seed rate charts as a guide. Set the pounds-per-acre desired at the indicator number for your row spacing and complete the following procedure to calibrate the drill for your specific seed.
 - A. Place several pounds of seed over three of the feeder cups at the outboard end of the small seeds box.
 - B. Pull the seed tubes out of these three disk openers. Lower the drill to planting position in order to activate the clutch.
 - C. Jack the drive wheel off the ground until it turns freely and support the gauge wheel arm with stable blocking or stands.
 - D. Place a container under the three seed tubes to gather the seed as it is metered.
 - E. Rotate the drive gauge wheel until one acre has been tallied on the acremeter. Be sure to check the three feeder cups to make sure each cup has plenty of seed coming into it. This will be approximately 182 rotations.
 - F. Weigh the seed which has been metered. Divide by three. This will give you the ounces/pounds metered by each feeder cup. Multiply by the number of openers on your drill to arrive at the total pounds-per-acre your drill would meter at that setting. If this figure is different than desired, set your feed cup adjustment lever accordingly.

Repeat procedures A through F on each drill section.

5. You may want to repeat the calibration procedure if the results of your calibration vary greatly from the suggested setting contained in this manual.

REMEMBER: Tire size and field conditions will also affect seeding rates. Be certain that your drill rib tires are 9.5L x 15 and that they have the proper inflation. When drilling, check the amount of seed you are using by noting acres drilled, amount of seed added to the small seeds box, and level of seed in the small seeds box. If you suspect that you are drilling more or less than desired, and you have accurately calibrated the drill to your seed, you may need to adjust the seeding rate slightly to compensate for your field conditions.

| SEED VARIETY | ROW SPACING | SEED RATE INDICATOR SETTING NUMBER (Pounds Per Acre) | | | | | | | | | |
|---|-------------|--|------|------|------|------|------|------|------|------|------|
| | | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |
| Alfalfa; Red, Alsike & Ladino Clovers | 6" | 4 | 8 | 12.5 | 19.5 | 24 | 29 | 36 | 42 | 49 | 54 |
| | 7" | 3.5 | 7 | 10.5 | 17 | 21 | 25 | 31 | 36 | 42.5 | 47 |
| | 7 1/2" | 3 | 6 | 10 | 15.5 | 19 | 23 | 29 | 33.5 | 39 | 43 |
| | 8" | 2.5 | 5.5 | 9 | 14 | 17.5 | 21 | 26 | 31 | 36 | 39.5 |
| | 10" | 2.25 | 5 | 7.5 | 12 | 14.5 | 17 | 21.5 | 25 | 29 | 32 |
| | 12" | 2 | 4 | 6 | 9.5 | 12 | 14.5 | 18 | 21 | 24.5 | 27 |
| Lespedeza Hulled, Serotia, Crimson, Clover, Birdsfoot Trefoil | 6" | 3.5 | 7 | 11 | 21 | 26 | 32 | 40.5 | 45 | 57 | 63.5 |
| | 7" | 3 | 6 | 9.5 | 18 | 22.5 | 27.5 | 35 | 39.5 | 49 | 55 |
| | 7 1/2" | 2.5 | 5.5 | 8.5 | 16.5 | 20.5 | 25.5 | 32 | 36.5 | 45.5 | 50.5 |
| | 8" | 2.25 | 5 | 8 | 15 | 19 | 23 | 29.5 | 33.5 | 41.5 | 46.5 |
| | 10" | 2 | 4 | 6.5 | 12.5 | 15.5 | 19 | 24 | 27.5 | 34 | 38 |
| | 12" | 1.5 | 3.5 | 5.5 | 10 | 13 | 16 | 20 | 23 | 28.5 | 31.5 |
| Lespedeza Unhulled | 6" | 2.5 | 4.5 | 7 | 12 | 15 | 18 | 21 | 24 | 27 | 30 |
| | 7" | 2 | 4 | 6 | 10 | 13 | 15.5 | 18 | 21 | 23.5 | 26 |
| | 7 1/2" | 1.75 | 3.5 | 5.5 | 9.5 | 12 | 14.5 | 16.5 | 19 | 21.5 | 24 |
| | 8" | 1.5 | 3 | 5 | 8.5 | 11 | 13 | 15 | 17.5 | 19.5 | 22 |
| | 10" | 1.25 | 2.5 | 4 | 7 | 9 | 10.5 | 12.5 | 14.5 | 16 | 18 |
| | 12" | 1 | 2 | 3.5 | 6 | 7.5 | 9 | 10 | 12 | 13.5 | 15 |
| Timothy; Red Top; Sand & Love Grass | 6" | 2.25 | 4.5 | 6.5 | 9.5 | 12 | 14.5 | 17.5 | 20 | 23.5 | 26 |
| | 7" | 2 | 4 | 5.5 | 8 | 10 | 12.5 | 15 | 17 | 20 | 22.5 |
| | 7 1/2" | 1.75 | 3.5 | 5 | 7.5 | 9.5 | 11.5 | 14 | 16 | 18.5 | 20.5 |
| | 8" | 1.5 | 3 | 4.5 | 6.5 | 8.5 | 10.5 | 12.5 | 14.5 | 17 | 19 |
| | 10" | 1.25 | 2.5 | 3.5 | 5.5 | 7 | 8.5 | 10.5 | 12 | 14 | 15.5 |
| | 12" | 1 | 2 | 3 | 4.5 | 6 | 7 | 8.5 | 10 | 11.5 | 13 |
| Kentucky Bluegrass; Fescue | 6" | 1 | 2 | 3 | 4.5 | 5.5 | 6.5 | 7.5 | 9 | 10 | 11 |
| | 7" | -- | 1.75 | 2.5 | 4 | 4.5 | 5.5 | 6.5 | 7.5 | 8.5 | 9.5 |
| | 7 1/2" | -- | 1.5 | 2.25 | 3.5 | 4.25 | 5 | 6 | 7 | 8 | 8.5 |
| | 8" | -- | 1.25 | 2 | 3 | 4 | 4.5 | 5.5 | 6.5 | 7 | 8 |
| | 10" | -- | 1 | 1.5 | 2.5 | 3 | 3.5 | 4.5 | 5 | 6 | 6.5 |
| | 12" | -- | -- | 1.25 | 2.25 | 2.5 | 3 | 3.5 | 4.5 | 5 | 5.5 |
| Reed Canary | 6" | 1.5 | 3 | 4.5 | 6.5 | 8 | 10 | 12 | 13.5 | 15 | 16.5 |
| | 7" | 1.25 | 2.5 | 4 | 5.5 | 7 | 8.5 | 10.5 | 11.5 | 13 | 14 |
| | 7 1/2" | 1 | 2.25 | 3.5 | 5 | 6.5 | 8 | 9.5 | 10.5 | 12 | 13 |
| | 8" | -- | 2 | 3 | 4.5 | 5.5 | 7 | 8.5 | 10 | 11 | 12 |
| | 10" | -- | 1.75 | 2.5 | 3.5 | 4.5 | 6 | 7 | 8 | 9 | 10 |
| | 12" | -- | 1.5 | 2.25 | 3 | 4 | 5 | 6 | 6.5 | 7.5 | 8 |
| German Millet | 6" | 3 | 6 | .5 | 16.5 | 20.5 | 24.5 | 30 | 35.5 | 41.5 | 46.5 |
| | 7" | 2.5 | 5 | 9 | 14 | 17.5 | 21 | 26 | 30.5 | 36 | 40 |
| | 7 1/2" | 2.25 | 4.5 | 8.5 | 13 | 16.5 | 19.5 | 24 | 28.5 | 33 | 37 |
| | 8" | 2 | 4 | 7.5 | 12 | 15 | 18 | 22 | 26 | 30.5 | 34 |
| | 10" | 1.75 | 3.5 | 6 | 10 | 12 | 14.5 | 18 | 21 | 25 | 28 |
| | 12" | 1.5 | 3 | 5 | 8 | 10 | 12 | 15 | 17.5 | 20.5 | 23 |
| Sudan Grass | 6" | 3 | 6 | 10.5 | 16.5 | 20.5 | 26 | 31.5 | 37 | 43.5 | 48.5 |
| | 7" | 2.5 | 5 | 9 | 14 | 17.5 | 22.5 | 27 | 32 | 37.5 | 42 |
| | 7 1/2" | 2.25 | 4.5 | 8.5 | 13 | 16.5 | 18 | 25 | 29.5 | 34.5 | 38.5 |
| | 8" | 2 | 4 | 7.5 | 12 | 15 | 19 | 23 | 27 | 32 | 35.5 |
| | 10" | .175 | 3.5 | 6 | 10 | 12 | 15.5 | 19 | 22 | 26 | 29 |
| | 12" | 1.5 | 3 | 5 | 8 | 10 | 13 | 15.5 | 18.5 | 21.5 | 24 |

WARRANTY

Great Plains Manufacturing, Incorporated warrants to the original purchaser that this Grain Drill will be free from defects in material and workmanship for a period of one year from the date of original purchase when used as intended and under normal service and conditions for personal use; 90 days for commercial or rental purposes. This Warranty is limited to the replacement of any defective part by Great Plains Manufacturing, Incorporated and the installation by the dealer of any such replacement part. Great Plains reserves the right to inspect any equipment or part which are claimed to have been defective in material or workmanship.

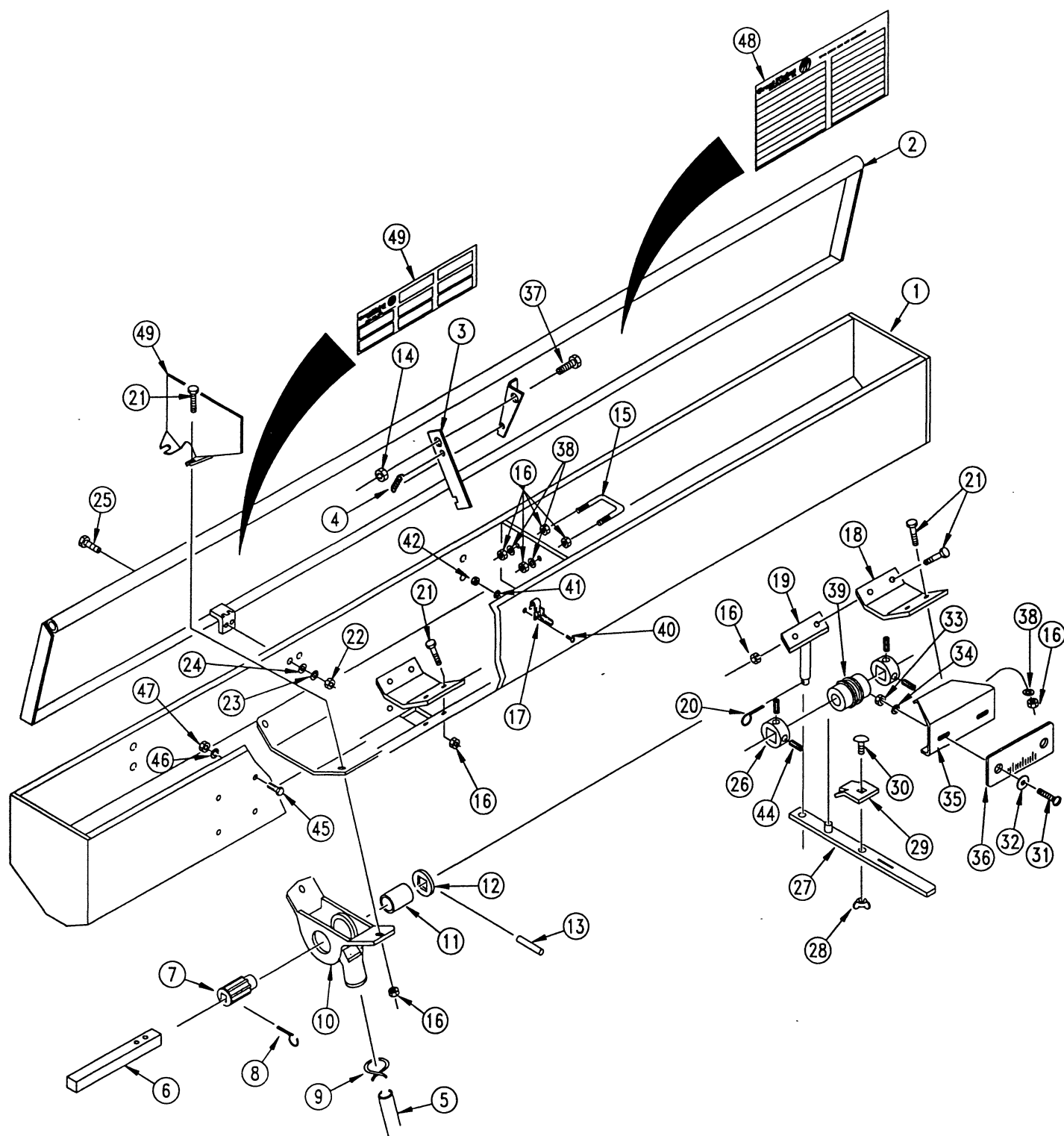
This Warranty does not apply to any part or product which in Great Plains' judgement shall have been misused or damaged by accident or lack of normal maintenance or care, or which has been repaired or altered in a way which adversely affects its performance or reliability, or which has been used for a purpose for which the product is not designed. This Warranty shall not apply if the product is towed at a speed in excess of 20 miles per hour.

Claims under this Warranty must be made to the dealer which originally sold the product and all warranty adjustments must be made through such dealer. Great Plains reserves the right to make changes in materials or design of the product at any time without notice.

This Warranty shall not be interpreted to render Great Plains liable for damages of any kind, direct, consequential, or contingent, to property. Furthermore, Great Plains shall not be liable for damages resulting from any cause beyond its reasonable control. This Warranty does not extend to loss of crops, losses caused by harvest delays or any expense or loss for labor, supplies, rental machinery or for any other reason.

No other warranty of any kind whatsoever, express or implied, is made with respect to this sale; and all implied warranties of merchantability and fitness for a particular purpose which exceed the obligations set forth in this written warranty are hereby disclaimed and excluded from this sale.

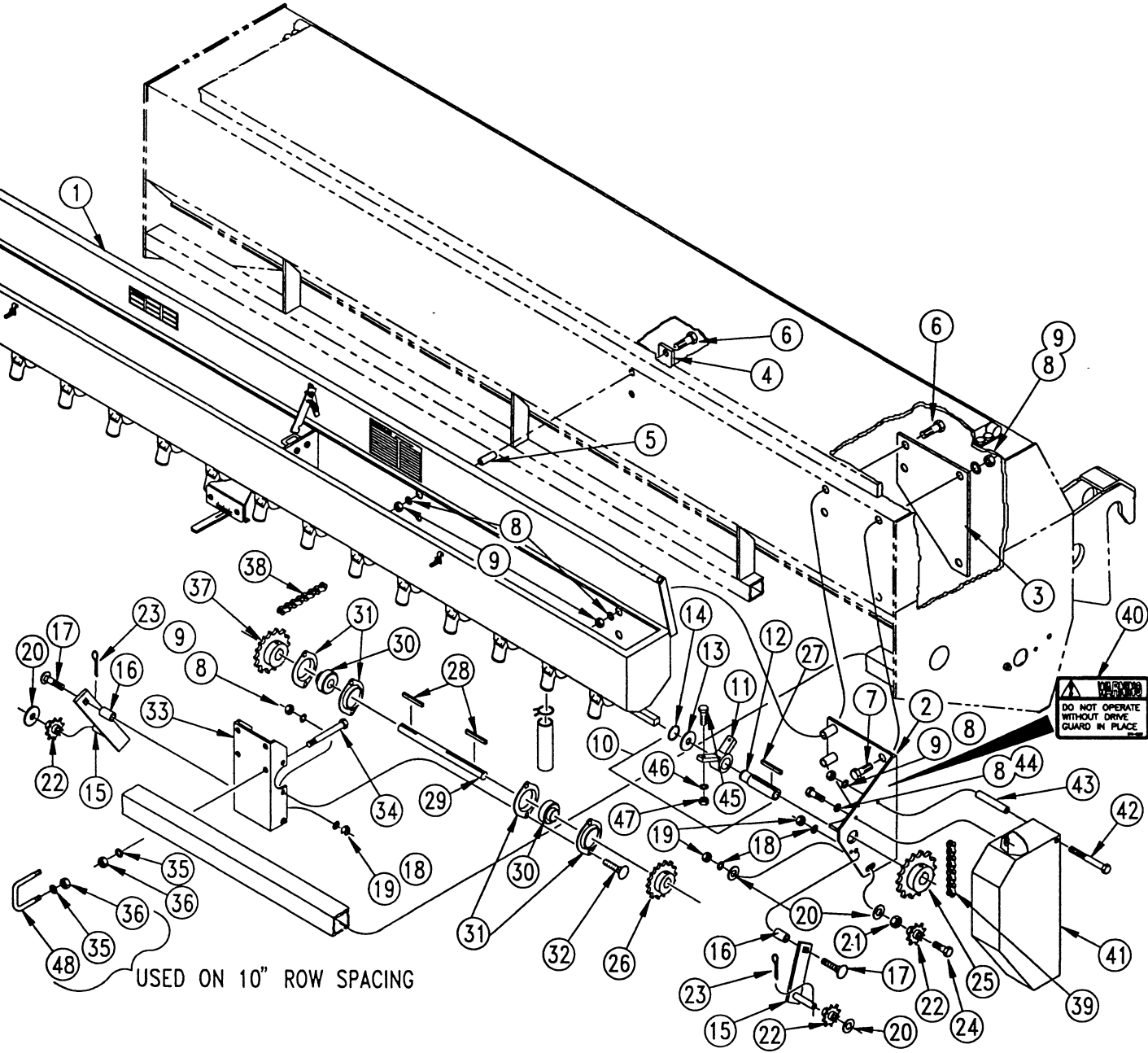
This Warranty is not valid unless registered with Great Plains Manufacturing, Incorporated within 10 days from the date of original purchase.



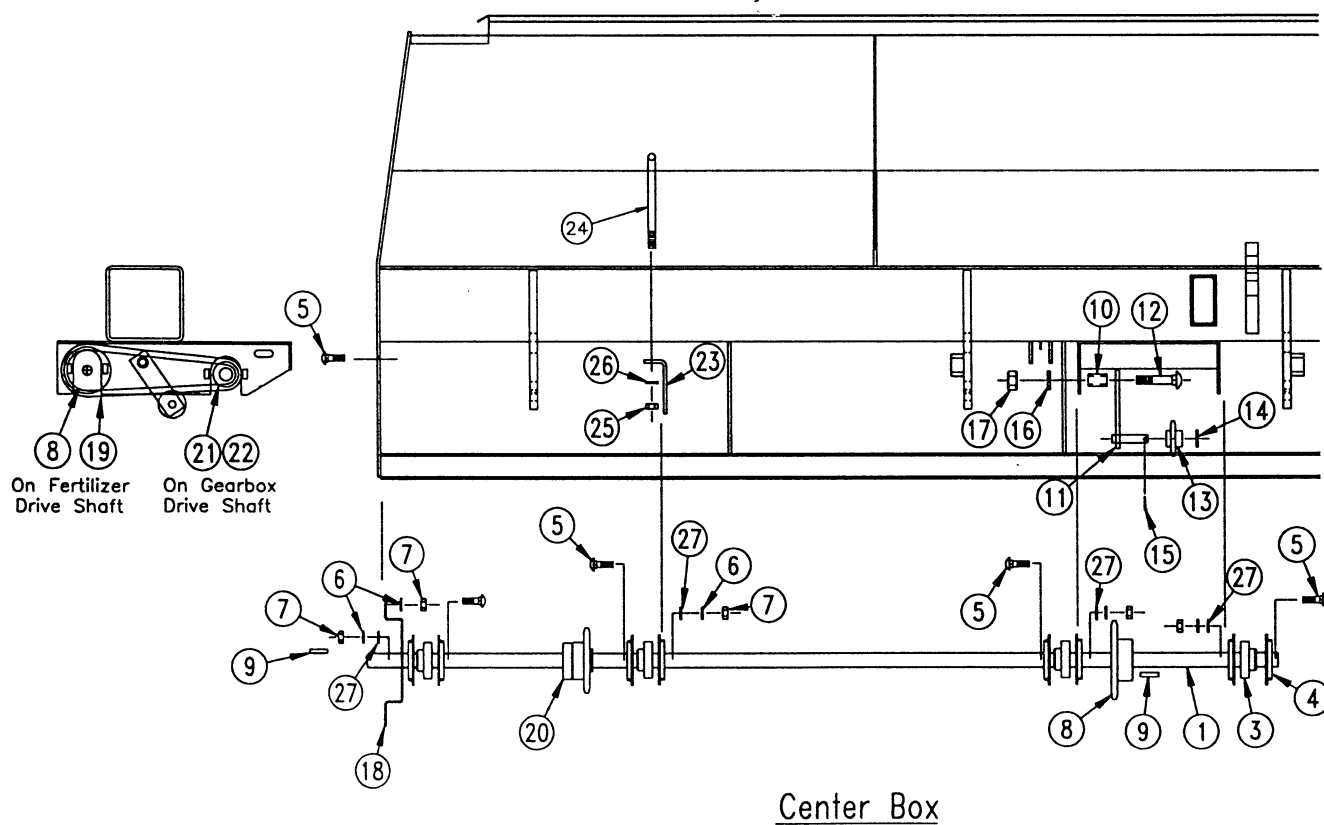
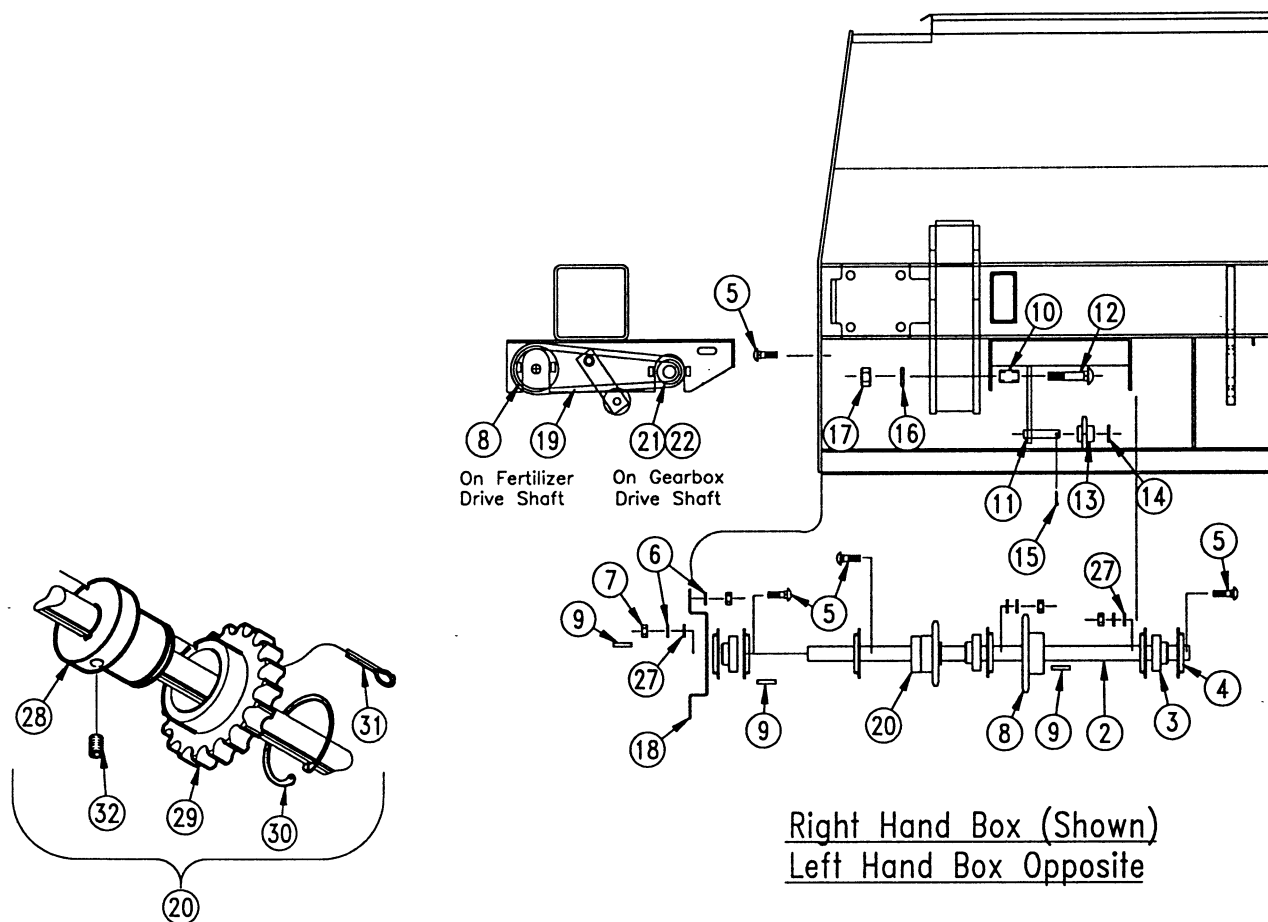
NOTE: On the left box assemblies the drive end of the cup shaft (end that is not drilled) is on the left end (shown). Right box assemblies are on the right.

| Ref. | Part No. | Description |
|------|----------|---|
| 1. | 123-060H | Small Seeds Box 6" - Left Hand |
| | 123-059H | Small Seeds Box 6" - Right Hand |
| | 123-088H | Small Seeds Box 7" - Left Hand |
| | 123-089H | Small Seeds Box 7" - Right Hand |
| | 123-090H | Small Seeds Box 7 1/2" - Left Hand |
| | 123-091H | Small Seeds Box 7 1/2" - Right Hand |
| | 123-092H | Small Seeds Box 8" - Left Hand |
| | 123-093H | Small Seeds Box 8" - Right Hand |
| | 123-076H | Small Seeds Box 10" - Left Hand |
| | 123-077H | Small Seeds Box 10" - Right Hand |
| 2. | 123-063H | 96" Seed Box Lid |
| 3. | 123-125D | Lid Lock Bar |
| 4. | 807-018C | Spring Lid Latch Extension |
| 5. | 123-203D | Grass Seed Hose End Wheel |
| 6. | 123-314D | 96" Seed Cup Shaft - 6" Spacing |
| | 123-315D | 96" Seed Cup Shaft - 7" Spacing |
| | 123-313D | 96" Seed Cup Shaft - 7 1/2" Spacing |
| | 123-316D | 96" Seed Cup Shaft - 8" Spacing |
| | 123-317D | 96" Seed Cup Shaft - 10" Spacing |
| 7. | 817-010C | Grass Seeder Sprocket |
| 8. | 805-067C | Pin, Cotter 1/8" x 3/4" |
| 9. | 800-029C | Clamp Hose Grass Seed |
| 10. | 817-008C | Grass Seeder Cup Assembly |
| 11. | 817-009C | Grass Seeder Sleeve |
| 12. | 804-042C | Washer, Grass Seeder Cup Shaft |
| 13. | 805-057C | Pin, Roll 1/8" x 3/4" |
| 14. | 803-007C | Nut, Lock 1/4"-20 Plated |
| 15. | 806-025C | U-Bolt 1/4"-20 x 15/16" x 1" Plated |
| 16. | 803-006C | Nut, Hex 1/4" x 20 Gr 3 Plated |
| 17. | 800-027C | Latch Grass Seeder |
| 18. | 123-118D | Seed Adjustment Support |
| 19. | 123-050H | Adjustment Handle Pivot |
| 20. | 805-019C | Pin, Cotter 5/32" x 1" Plated |
| 21. | 802-148C | Bolt, Whiz Head 1/4"-20 x 1/2" Gr5 |
| 22. | 803-001C | Nut, Hex #10-24 Plated |
| 23. | 804-004C | Washer, Internal Star #10 Plated |
| 24. | 804-046C | Washer, Flat #10 Plated |
| 25. | 801-003C | Screw, Round Head #10-24 x 1/2" Plated |
| 26. | 123-436D | Seed Cup Shaft Locking Collar |
| 27. | 123-368H | Adjustment Handle, Rear |
| 28. | 803-058C | Nut, Wing 5/16"-18 |
| 29. | 123-113D | Lock Tab |
| 30. | 802-092C | Bolt, Carriage 5/16"-18 x 3/4" Gr5 |
| 31. | 801-001C | Screw, Round Head #8-32 x 3/8" Brass |
| 32. | 804-003C | Washer, Flat #8 Brass |
| 33. | 803-035C | Nut, Hex #8-32 Brass |
| 34. | 804-022C | Washer, Internal Star #8 Brass |
| 35. | 123-370D | Gauge Mounting Bracket |
| 36. | 819-041C | Name Plate Adjustment Gauge - Rear |
| 37. | 802-078C | Bolt, Hex Head 1/4"-20 x 5/8" Gr5 |
| 38. | 804-006C | Washer, Lock Spring 1/4" Plated |
| 39. | 123-116D | Seed Adjustment Spool |
| 40. | 801-017C | Screw, Pan Head #6-32 x 1/2" Long Stainless Steel |
| 41. | 804-050C | Washer, Lock #6 Stainless Steel |
| 42. | 803-065C | Nut, Hex #6-32 Stainless Steel |
| 43. | 123-310D | Small Grass Box Partition |
| 44. | 801-035C | Screw, Set Hex Socket 5/16"-18 x 3/8" Long |
| 45. | 802-007C | Bolt, Hex Head 5/16"-18 x 3/4" Gr5 |
| 46. | 804-009C | Washer, Lock 5/16" |
| 47. | 803-008C | Nut, Hex 5/16"-18 Gr 2 |
| 48. | 818-207C | Decal, Seed Rate Adjustment Instructions |
| 49. | 818-031C | Decal, Seed Rate |

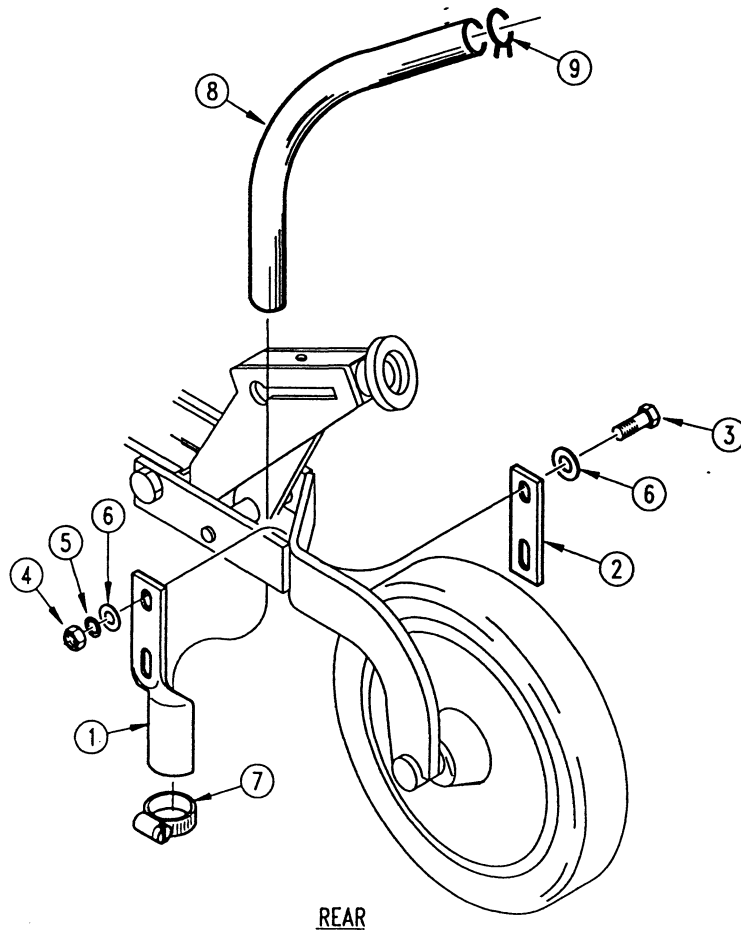
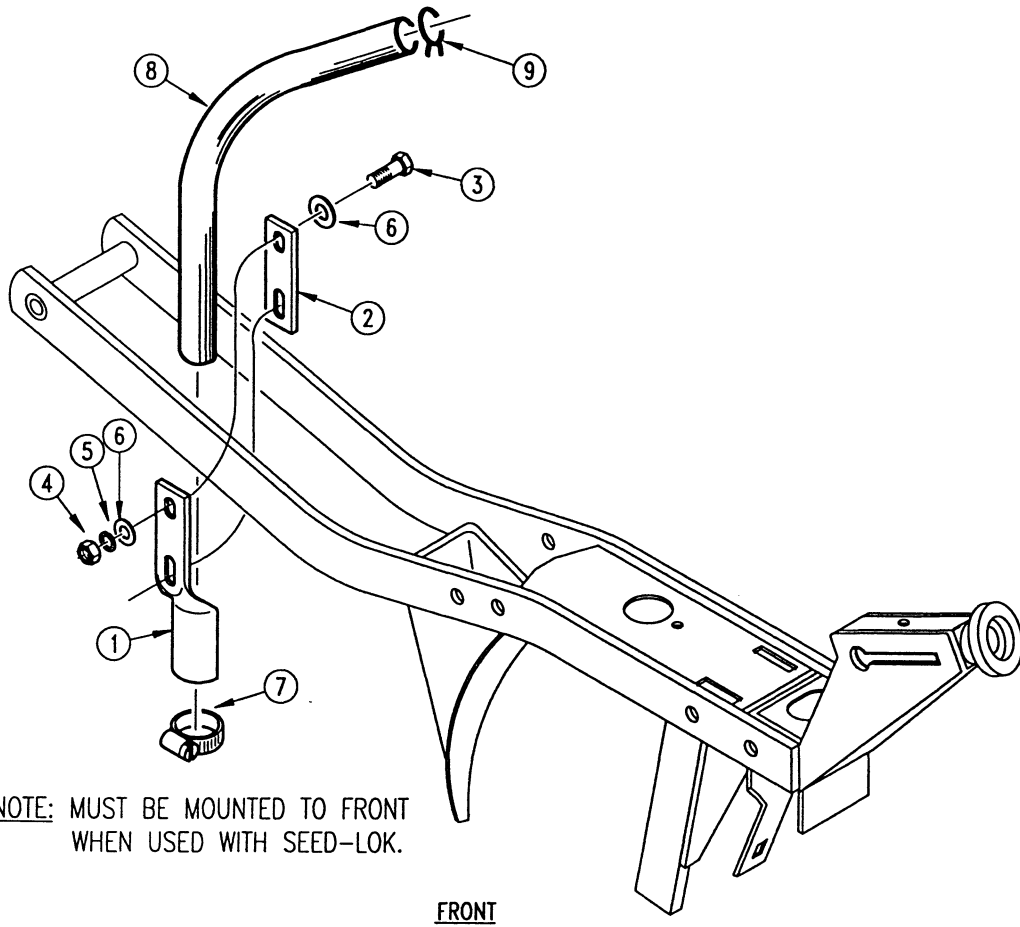
was 805-067C cotter pin until 7/20/95



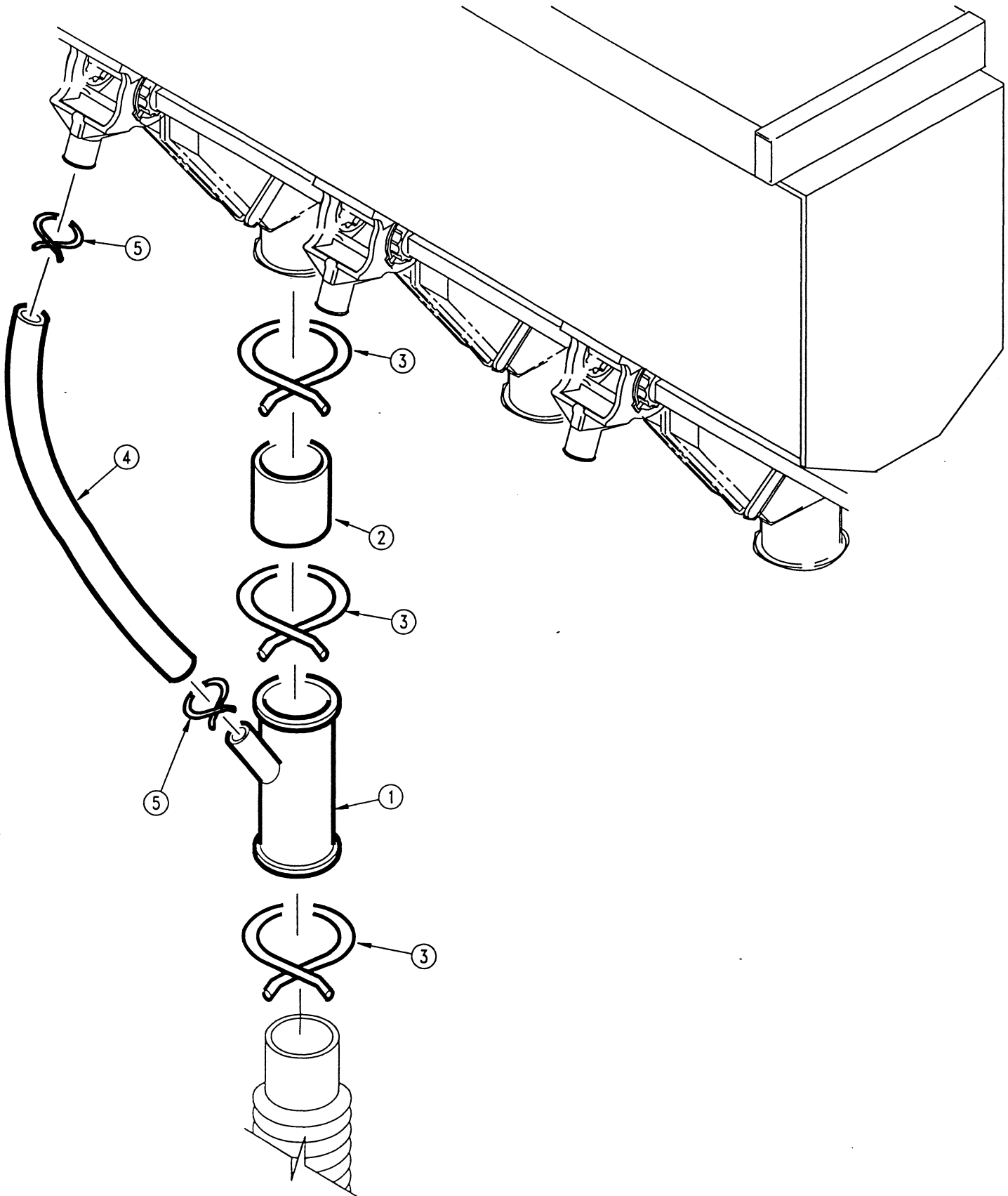
| Ref. | Part No. | Description |
|------|----------|--|
| 1. | 123-356L | 20 Cup Box Assembly Left Hand |
| | 123-357L | 20 Cup Box Assembly Right Hand |
| | 123-358L | 17 Cup Box Assembly Left Hand |
| | 123-359L | 17 Cup Box Assembly Right Hand |
| | 123-360L | 16 Cup Box Assembly Left Hand |
| | 123-361L | 16 Cup Box Assembly Right Hand |
| | 123-362L | 15 Cup Box Assembly Left Hand |
| | 123-363L | 15 Cup Box Assembly Right Hand |
| | 123-364L | 12 Cup Box Assembly Left Hand |
| | 123-365L | 12 Cup Box Assembly Right Hand |
| 2. | 123-352H | Drive Mount Plate - Left Hand |
| | 123-353H | Drive Mount Plate - Right Hand |
| 3. | 123-329D | Drive Mount Backing Plate |
| 4. | 123-257D | No-Till Back Plate |
| 5. | 123-320D | Box Mounting Tube |
| 6. | 802-138C | Bolt, Hex 5/16"-18 x 2 1/4" Long Gr 5 Plated |
| 7. | 802-159C | Bolt, Hex Head 5/16"-18 x 1" Gr 5 Plated |
| 8. | 804-009C | Washer, Lock Spring 5/16" Plated |
| 9. | 803-008C | Nut, Hex 5/16"-18 Gr2 Plated |
| 10. | 123-367S | Small Grass End Drive Assembly (Includes 11, 12, 13, and 14) |
| 11. | 817-026C | Drive Sprocket Hanger Bearing |
| 12. | 123-318D | Cup Drive Shaft |
| 13. | 804-044C | Washer, Flat 1 3/8" x .876 x .04 |
| 14. | 800-028C | Snap Ring 7/8" |
| 15. | 152-021H | Idler Bar |
| 16. | 176-031D | Drive Idler Pivot Tube Short |
| 17. | 802-106C | Bolt, Carriage 1/2"-13 x 1 1/2" Long Gr5 Plated |
| 18. | 804-015C | Washer, Lock Spring 1/2" Plated |
| 19. | 803-020C | Nut, Hex 1/2"-13 Gr2 Plated |
| 20. | 804-016C | Washer, Flat 1/2" SAE Plated |
| 21. | 803-036C | Nut, Hex Jam 1/2-13 Plated |
| 22. | 817-025C | Idler Sprocket #40 12 Tooth |
| 23. | 805-064C | Pin, Cotter 7/64" x 1" Long |
| 24. | 802-226C | Bolt, Hex Head 1/2"-13 x 2 3/4" Long Gr5 |
| 25. | 808-101C | Sprocket 40B32 1" Bore With Key Way and Set Screw |
| 26. | 808-095C | Sprocket 40B25 3/4" Bore With Key Way and Set Screw |
| 27. | 123-004D | Drive Sprocket Key |
| 28. | 123-146D | Key 3/16" x 7/8" |
| 29. | 123-323D | 30' Grass Seeder Jumper Shaft |
| 30. | 822-040C | Bearing SB 204-12 |
| 31. | 822-041C | Flangette 47 MST |
| 32. | 802-282C | Bolt, Carriage 5/16"-18 x 1" Long Gr5 Plated |
| 33. | 123-321D | Jumper Shaft Bracket |
| 34. | 802-024C | Bolt, Hex Head 3/8"-16 x 3" Long Gr |
| 35. | 804-013C | Washer, Lock Spring 3/8" Plated |
| 36. | 803-014C | Nut, Hex 3/8"-16 Gr2 Plated |
| 37. | 808-072C | Sprocket 40B28 x 3/4" Bore With Key Way And Set Screw |
| 38. | 809-042C | Chain, Roller #40 x 98 Pitches |
| 39. | 809-059C | Chain, Roller #40 x 119 Pitches |
| 40. | 818-205C | Decal, Safety |
| 41. | 123-379H | Drive Guard, Left Hand |
| | 123-380H | Drive Guard, Right Hand |
| 42. | 802-279C | Bolt, Hex Head 5/16"-18 x 4" Long Gr5 Plated |
| 43. | 123-328D | Drive Guard Spacer Tube |
| 44. | 802-007C | Bolt, Hex Head 5/16"-18 x 3/4" Gr5 |
| 45. | 802-004C | Bolt, Hex Head 1/4"-20 x 3/4" Gr 5 |
| 46. | 804-006C | Washer, Lock Spring 1/4" Plated |
| 47. | 803-006C | Nut, Hex 1/4"-20 Gr 2 Plated |
| 48. | 806-004C | U-Bolt 3/8"-16 X 2" X 2 3/4" (On 10" Spacing Only) |



| Ref. | Part No. | Description |
|------|----------|--|
| 1. | 142-162D | Fertilizer Drive Shaft, Center |
| 2. | 142-161D | Fertilizer Drive Shaft, Right And Left Hand |
| 3. | 822-040C | Bearing SB 204-12 |
| 4. | 822-041C | Flangette, 47 MST Bearing |
| 5. | 802-282C | Bolt, Carriage 5/16"-18 x 1" Long |
| 6. | 804-009C | Washer, Lock 5/16" |
| 7. | 803-008C | Nut 5/16"-18 |
| 8. | 808-100C | Sprocket #40B22 x 3/4" Bore With Key Way And Set Screw |
| 9. | 123-146D | Key, 3/16" x 7/8" Long |
| 10. | 176-031D | Drive Idler Pivot Tube |
| 11. | 152-021H | Idler Bar Weldment |
| 12. | 802-106C | Bolt, Carriage 1/2"-13 x 1 1/2" Long |
| 13. | 817-025C | 12T Idler Sprocket |
| 14. | 804-016C | Washer, Flat 1/2" SAE Plated |
| 15. | 805-064C | Pin, Cotter 7/64" x 1" Long |
| 16. | 804-015C | Washer, Lock 1/2" |
| 17. | 803-020C | Nut 1/2"-13 |
| 18. | 145-102D | Fertilizer Jackshaft, Bracket Mount |
| 19. | 809-065C | Chain Roller #40 x 61 Pitches |
| 20. | 123-366S | Shear Sprocket Assembly 19 Tooth 3/4" Bore (Used On Drill With Small Grass Seeder) |
| 21. | 808-024C | Sprocket #40B12 x 1" Bore With Key Way And Set Screw |
| 22. | 123-004D | Key 1/4" x 1" Long |
| 23. | 145-108D | Fertilizer Shaft Support Hanger (Used On Drill With Small Grass Seeder) |
| 24. | 806-051C | U-Bolt 3/8"-16 x 6" x 6 3/4" Long |
| 25. | 803-014C | Nut, Hex 3/8"-16 |
| 26. | 804-013C | Washer, Lock 3/8" |
| 27. | 804-010C | Washer, Flat 5/16" USS Plate |
| 28. | 123-330D | Drive Sprocket Hub |
| 29. | 123-285H | Drive Sprocket Assembly |
| 30. | 800-044C | Snap Ring, Exterior 1 1/2" Shaft |
| 31. | 805-078C | Cotter Pin, 3/32" x 2" Long |
| 32. | 801-019C | Set Screw, Socket Head 1/4"-20 x 1/4" Long |



| Ref. | Part No. | Description |
|------|----------|---|
| | 123-550K | Small Seeds Hose Hardware Press Wheel Mount |
| 1. | 123-202D | Hose Retainer, Grass Seed |
| 2. | 123-298D | Mount Plate, Hose Retainer |
| 3. | 802-005C | Bolt, Hex 1/4"-20 x 1" Long |
| 4. | 803-006C | Nut, Hex 1/4"-20 |
| 5. | 804-006C | Washer, Lock 1/4" |
| 6. | 804-007C | Washer, Flat 1/4" SAE |
| 7. | 800-024C | Hose Clamp, worm |
| 8. | 123-307D | Hose, Grass Seed 60" |
| 9. | 800-029C | Hose Clamp, Grass Seed |



| Ref. | Part No. | Description |
|-------------|-----------------|--------------------------------------|
| | 123-561K | Small Seeds Y-Tube Row Assembly |
| 1. | 800-009C | Hose Clamp, 1 5/8" |
| 2. | 123-231D | Connector Hose, Grass Seed Drop Tube |
| 3. | 800-029C | Hose Clamp, Grass Seed |
| 4. | 123-232D | Hose, Grass Seed Short |
| 5. | 817-052C | Drop Tube, Grass Seed |

Great Plains Manufacturing, Inc.

Corporate Office: P.O. Box 5060
Salina, Kansas 67402-5060 USA
