HAYBUSTER®

77/107 DRILLS

107 DRILL - S.N. CJ 4427 & UP

77 DRILL - S.N. CJ 50177 & UP

Operating Instructions and Parts Reference

DURATECH® INDUSTRIES

PO BOX 1940, JAMESTOWN, ND 58402-1940

JUNE 2014

0500117

HAYBUSTER®

A Tradition of Innovation Since 1966

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Operating Instructions and Parts Reference

DuraTech Industries International Inc. (DuraTech Industries) has made every effort to assure that this manual completely and accurately describes the operation and maintenance of the 77/107 DRILL™ as of the date of publication. DuraTech Industries reserves the right to make updates to the machine from time to time. Even in the event of such updates, you should still find this manual to be appropriate for the safe operation and maintenance of your unit.

This manual, as well as materials provided by component suppliers to DuraTech Industries are all considered to be part of the information package. Every operator is required to read and understand these manuals, and they should be located within easy access for periodic review.

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A Tradition of Innovation Since 1966

Foreword

All personnel must read and understand before operating unit

- Foreword and Section 1, important safety information.
- Section 2, ”Dealer Preparation,” to verify that the machine has been prepared for use.
- Section 3, “Introduction,” which explain normal operation of the machine.
- Section 4.1, “Operating Instructions” Pre-Operation Inspection Check List.

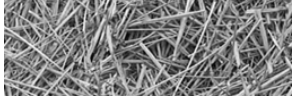
Appropriate use of the unit

The 77/107 Grain Drill is designed to seed No-Till, Minimum Till, or conventionally tilled fields. The two compartment hopper offers the flexibility of seeding with fertilizer, seeding alone, or planting two different seeds.

Operator protection

As with all machinery, care needs to be taken by the operator in order to insure the safety of the operator and those in the surrounding area.

WARNING: Operators and those observing the operation of the 77/107 GRAIN DRILLS are required to wear head, eye, and ear protection. No loose clothing is allowed.



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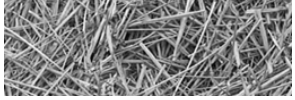

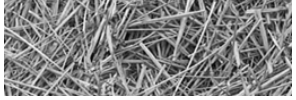

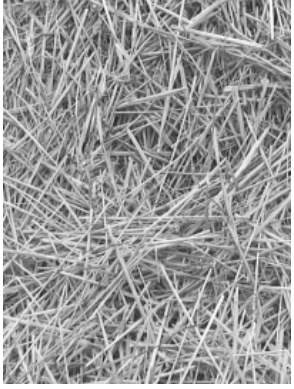

77/107 DRILLS

107 DRILL - S.N. CJ 4427 & UP

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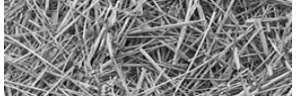
PART 1: Operating Instructions



Introduction

The 77/107 Grain Drills are designed to seed No-Till, Minimum Till, or conventionally tilled fields. Two 30 gallon tanks are available for added ballast to penetrate the tough no-till conditions.

The two compartment hopper offers the flexibility of seeding with fertilizer, seeding alone, or planting two different seeds. The metering system for each hopper is infinitely adjustable.

Field hitches are available for one or multiples of two, three, and four of the model 107 Drill only. A tow hitch is also available for the 107 Drill to allow the towing of two or more drills in transport.

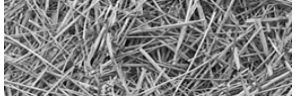
Purpose

The purpose of this owner's manual is to explain maintenance requirements and routine adjustments for the most efficient operation of your 77/107 Grain Drill. There is also a trouble shooting section that may help in case of problems in the field. Any information not covered in this manual may be obtained from your dealer.

Special Note: When reference is made as to front, rear, right hand or left hand of this machine, the reference is always made from standing at the rear end of the machine and looking towards the hitch. Always use serial number and model number when referring to parts or problems. Please obtain your serial number and write it below for your future reference.

MODEL: 77 DRILL
107 DRILL

SERIAL NO. _____



Section 1: Safety

The safety of the operator is of great importance to DuraTech Industries/Haybuster. We have provided decals, shielding and other safety features to aid you in using your machine safely. In addition, we ask you to be a careful operator who will properly use and service your Haybuster equipment.

WARNING: FAILURE TO COMPLY WITH SAFETY INSTRUCTIONS THAT FOLLOW WITHIN THIS MANUAL COULD RESULT IN SEVERE PERSONAL INJURY OR DEATH. BEFORE ATTEMPTING TO OPERATE THIS MACHINE, CAREFULLY READ ALL INSTRUCTIONS CONTAINED WITHIN THIS MANUAL. ALSO READ THE INSTRUCTION MANUAL PROVIDED WITH YOUR TRACTOR.

THIS MACHINE IS NOT TO BE USED FOR ANY PURPOSE OTHER THAN THOSE EXPLAINED IN THE OPERATOR'S MANUAL, ADVERTISING LITERATURE OR OTHER DURATECH INDUSTRIES WRITTEN MATERIAL PERTAINING TO THE 77/107 GRAIN DRILL.

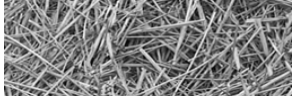
1.1 Safety-alert symbols

Decals are illustrated in **Part 2: Parts Reference.**

The safety decals located on your machine contain important and useful information that will help you operate your equipment safely.

To assure that all decals remain in place and in good condition, follow the instructions below:

- Keep decals clean. Use soap and water - not mineral spirits, adhesive cleaners and other similar cleaners that will damage the decal.
- Replace all damaged or missing decals. When attaching decals, surface temperature of the machine must be at least 40° F (5° C). The surface must be also be clean and dry.
- When replacing a machine component to which a decal is attached, be sure to also replace the decal.



DuraTech Industries uses industry accepted **ANSI** standards in labeling its products for safety and operational characteristics.

Safety-Alert Symbol

Read and recognize safety information. Be alert to the potential for personal injury when you see this safety-alert symbol.

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 the most extreme situations, typically for machine components that, for functional purposes, cannot be guarded.

DANGER:
Signal word - White Lettering/Red Background
Safety Alert Symbol - White Triangle/Red Exclamation Point

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.

WARNING:
Signal word - Black Lettering/Orange Background
Safety Alert Symbol - Black Triangle/Orange Exclamation Point

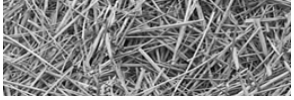
CAUTION: Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

CAUTION:
Signal word - Black Lettering/Yellow Background
Safety Alert Symbol - Black Triangle/Yellow Exclamation Point

This manual uses the symbols to the right to denote important safety instructions and information.

The **DANGER**, **WARNING** and **CAUTION** symbols are used to denote conditions as stated in the text above. Furthermore, the text dealing with these situations is surrounded by a box with a white background, will begin with **DANGER**, **WARNING**, or **CAUTION**.

The **INFORMATION** symbol is used to denote important information or notes in regards to maintenance and use of the machine. The text for this information is surrounded by a box with a light grey background, and will begin with either **Important** or **Note**.



1.2 Operator - personal equipment

THE OPERATOR

Physical Condition

You must be in good physical condition and mental health and not under the influence of any substance (drugs, alcohol) which might impair vision, dexterity or judgment.

Do not operate a **77/107 DRILL** when you are fatigued. Be alert - If you get tired while operating your **77/107 DRILL,** take a break. Fatigue may result in loss of control. Working with any farm equipment can be strenuous. If you have any condition that might be aggravated by strenuous work, check with your doctor before operating

Proper Clothing

Clothing must be sturdy and snug-fitting, but allow complete freedom of movement. Avoid loosefitting jackets, scarfs, neckties, jewelry, flared or cuffed pants, unconfined long hair or anything that could become entangled with the machine.

Protect your hands with gloves when handling discs and coulters. Heavy duty, nonslip gloves improve your grip and protect your hands.

Good footing is most important. Wear sturdy boots with nonslip soles. Steel-toed safety boots are recommended.

To reduce the risk of injury to your eyes never operate a **77/107 DRILL** unless wearing goggles or properly fitted safety glasses with adequate top and side protection.

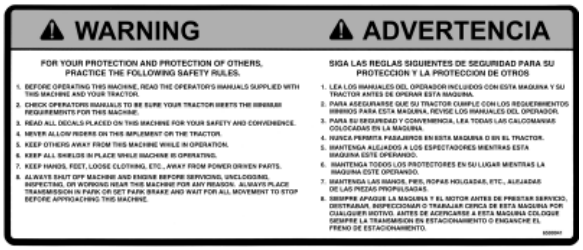
Tractor noise may damage your hearing. Always wear sound barriers (ear plugs or ear mufflers) to protect your hearing. Continual and regular users should have their hearing checked regularly.

1.3 Machine safety labels

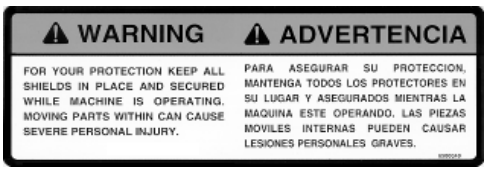
The safety decals located on your machine contain important information that will help you operate your equipment. Become familiar with the decals and their locations.

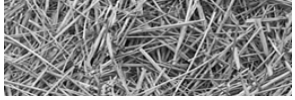
WARNING: FOR YOUR PROTECTION AND PROTECTION OF OTHERS, **PRACTICE THE FOLLOWING SAFETY RULES**.

1. BEFORE OPERATING THIS MACHINE, READ THE OPERATOR'S MANUALS SUPPLIED WITH THIS MACHINE AND YOUR TRACTOR.
2. CHECK OPERATORS MANUALS TO BE SURE YOUR TRACTOR MEETS THE MINIMUM REQUIREMENTS FOR THIS MACHINE.
3. READ ALL DECALS PLACED ON THIS MACHINE FOR YOUR SAFETY AND CONVENIENCE.
4. NEVER ALLOW RIDERS ON THIS IMPLEMENT OR THE TRACTOR.
5. KEEP OTHERS AWAY FROM THIS MACHINE WHILE IN OPERATION.
6. KEEP ALL SHIELDS IN PLACE WHILE MACHINE IS OPERATING.
7. KEEP HANDS, FEET, LOOSE CLOTHING, ETC., AWAY FROM POWER DRIVEN PARTS.
8. ALWAYS SHUT OFF MACHINE AND ENGINE BEFORE SERVICING, UNCLOGGING, INSPECTING, OR WORKING NEAR THIS MACHINE FOR ANY REASON. ALWAYS PLACE TRANSMISSION IN PARK OR SET PARK BRAKE AND WAIT FOR ALL MOVEMENT TO STOP BEFORE APPROACHING THIS MACHINE.

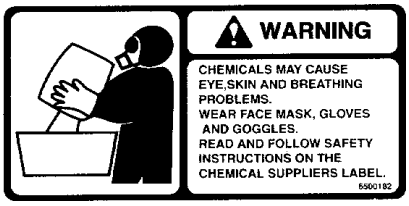


WARNING: FOR YOUR PROTECTION KEEP ALL SHIELDS IN PLACE AND SECURED WHILE MACHINE IS OPERATING MOVING PARTS WITHIN CAN CAUSE SEVERE PERSONAL INJURY.





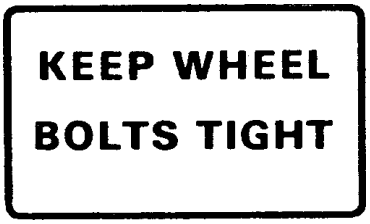
WARNING: CHEMICALS MAY CAUSE EYE, SKIN AND BREATHING PROBLEMS.
WEAR FACE MASK, GLOVES AND GOGGLES .
READ AND FOLLOW SAFETY INSTRUCTIONS ON THE CHEMICAL SUPPLIERS LABEL.

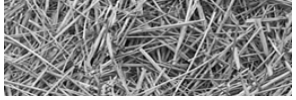


WARNING: NO RIDERS.
SERIOUS PERSONAL INJURY COULD RESULT FROM RIDING ON STEP.

WARNING: DISC BLADES ARE *EXTREMELY* SHARP!
WEAR HEAVY GLOVES WHEN SERVICING.

CAUTION: KEEP WHEEL BOLTS TIGHT.





- Replacement decals can be purchased from your Haybuster dealer.

1.4 Shielding

Shields are installed for your protection. Keep them in place, and replace damaged shields.

1.5 Personal equipment

Operators of this machine are encouraged to wear head, eye, and ear protection. Loose clothing is discouraged.

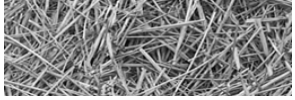
1.6 Safety review

BEFORE OPERATING

- Read and follow all instructions contained in:
  - A. This 77/107 DRILL Operator's Manual.
  - B. Tractor operator's manual.
  - C. Decals placed on the 77/107 Drill and Tractor.

NOTE: Additional copies of the above mentioned materials can be obtained from your dealer.

- Be sure all safety shields and covers are securely in place when machine is running.
- Read all warning and instructional decals placed on the machine for your safety and convenience.
- Allow only responsible, properly instructed individuals to operate machine. Carefully supervise inexperience operators.
- Make no modifications to this equipment unless specifically requested or recommended by DuraTech Industries.
- Tighten or replace any loose or cracked bolts, chains, hoses or connections.
- The towing vehicle must be of equal or greater weight than the grain drill for adequate braking capacity.



DURING OPERATION

- Exercise extreme caution with operating the drill on steep slopes or grades.
- Be sure all spectators are clear of the area where the drill is in operation or raised and lowered.
- Be sure the tractor operator is the only person riding the tractor. Allow no one to ride the drill at any time.
- Remember, loose clothing, necklaces and similar items are more easily caught in moving parts. Avoid the use of these items if possible and keep long hair confined.
- Never work under the drill when the drill is lifted up unless the safety stop bar is in position.
- Watch out for and avoid any object that might interfere with the proper operation of the machine.

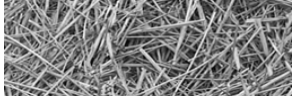
DURING SERVICE & MAINTENANCE

CAUTION: Before performing any maintenance or adjustments make sure machine is NOT running.

- Before working on or near drill for any reason including servicing, lubricating, cleaning, inspecting or refilling, or if working under drill or detaching from tractor, install safety stop bar (next to hydraulic cylinder).
- When replacing any part on your drill, be sure to use only DuraTech Industries authorized parts.
- Relieve all pressure in the hydraulic system before disconnecting the lines or performing other work on the system. Make sure all connections are tight and the hoses and lines are in good condition before applying pressure to the system.

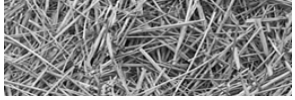
CAUTION: Hydraulic fluid escaping under pressure can be invisible and have enough force to penetrate the skin. When searching for a suspected leak, use a piece of wood or cardboard rather than your hands. If injured, seek medical attention immediately to prevent serious infection or reaction.

- Be careful when using a hoist or other lifting device. Use only devices that have adequate lifting capacity and be sure the chain or cable is securely attached.



WHEN TRANSPORTING ON PUBLIC ROADS

- Use good judgment and drive carefully, especially over rough or uneven roads.
- Be sure tractor brakes are properly adjusted and foot pedals locked together.
- Check your state laws regarding the use of lights, slow moving vehicle sign, safety chain and other possible requirements.
- Do not tow drills at speeds over 20 mph. It is recommended that drills be empty of seed or fertilizer when transporting.

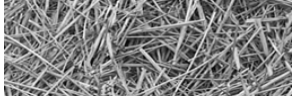


IMPORTANT WINCH SAFETY INFORMATION

- The winch is built for multipurpose hauling and lifting operations. It is not to be used as a hoist for lifting, supporting or transporting people, or for loads over areas where people could be present.
- Respect the winch. High forces are created when using a winch, creating potential safety hazards. It should be operated and maintained in accordance with instructions. Never allow children or anyone who is not familiar with the operation of the winch to use it. A winch accident could result in personal injury.
- Check winch for proper operation on each use. Do not use if damaged. Seek immediate repairs.
- Never exceed rated capacity. Excess load may cause premature failure and could result in serious personal injury.
- Never apply load on winch with cable fully extended. Keep at least three full turns of cable on the reel.
- Secure load properly. When winching operation is complete, do not depend on winch to support load.
- Operate with hand power only. This winch should not be operated with a motor of any kind. If the winch cannot be cranked easily with one hand, it is probably overloaded.

FAILURE TO COMPLY WITH ANY OF THE ABOVE SAFETY INSTRUCTIONS OR THOSE THAT FOLLOW WITHIN THIS MANUAL MAY RESULT IN SEVERE INJURY OR DEATH.

THIS DRILL IS NOT TO BE USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT IS INTENDED AS EXPLAINED IN THE OPERATOR'S MANUAL, ADVERTISING MATERIALS AND OTHER PERTINENT WRITTEN MATERIAL. PREPARED BY DURATECH INDUSTRIES.



Section 2: Dealer Preparation

2.1 Gauge Wheel Attachment

The heavy duty gauge wheels mount on the tool bar in front of the drill. The gauge wheels are adjustable to maintain a uniform planting depth when on side hills.

INSTALLATION

Step 1: Place the gauge wheel mount assembly in front of the second run assembly from either tool bar end. See the accompanying illustration.

Step 2: Mount the gauge wheel mount assembly to the tool bar by using two gauge wheel mount straps and four 5/8" x 6-1/2" hex bolts, lock washer and nuts provided. See accompanying illustration.

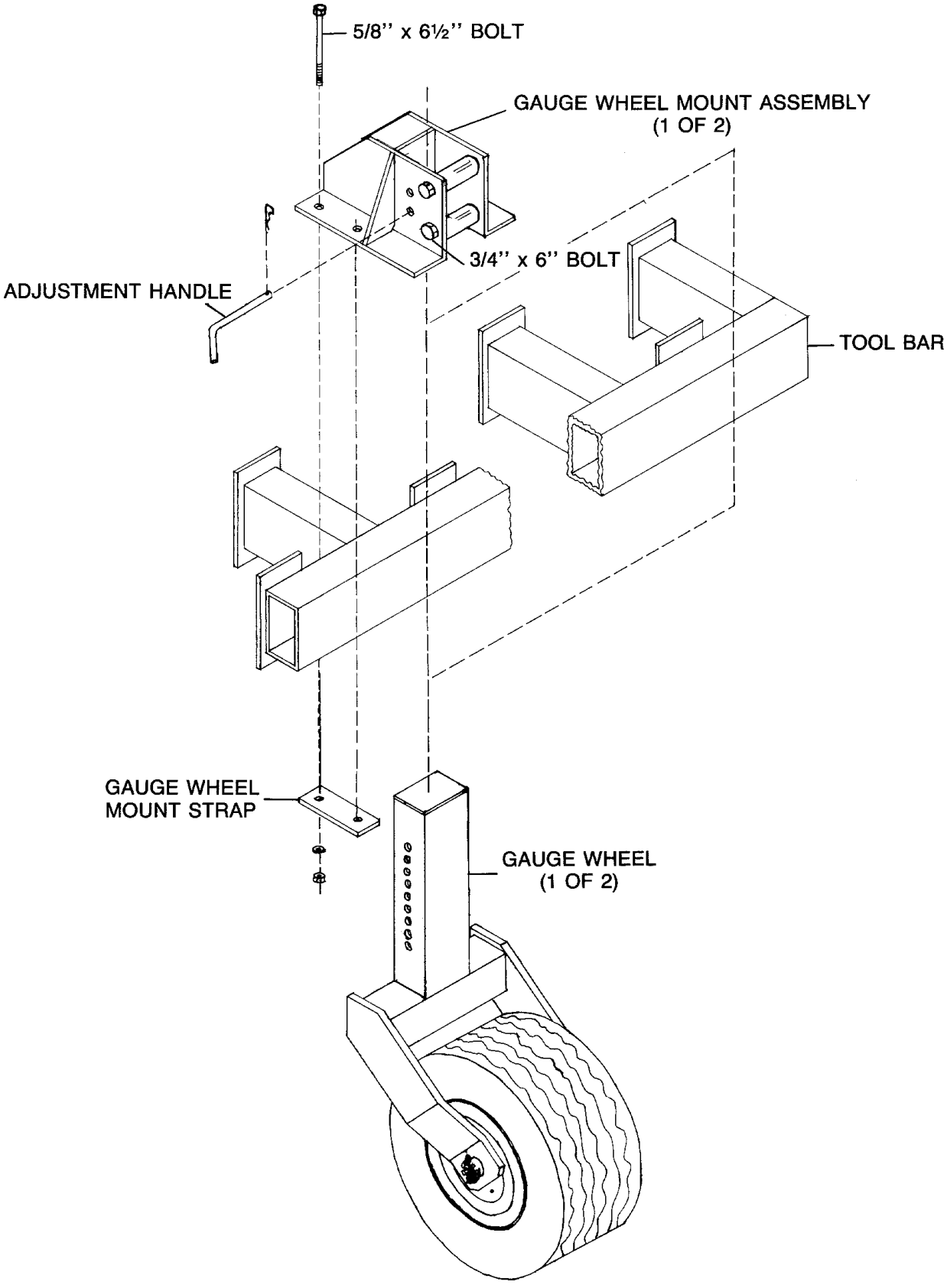
Step 3: Repeat Step 1 and Step 2 for the gauge wheel on the other side of the tool bar.

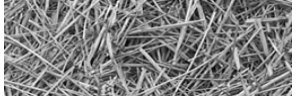
Step 4: Lift the tool bar using the drill's hydraulics and insert both gauge wheels into the bottom of the gauge wheel mount assemblies. See the accompanying illustration.

Step 5: If conditions prevent Step 4 from being done, the gauge wheels can be inserted into the front of the gauge wheel mount assemblies. To do this, remove all four bolt sleeves (two per gauge wheel mount assembly) by unbolting the four 3/4" x 6" hex bolts, lock washers and nuts and push the gauge wheels into the mount assemblies. Bolt the bolt sleeves on to the gauge wheel mount assemblies again.

Step 6: Adjust the gauge wheels to the desired position by inserting the adjustment handle through the proper gauge wheel adjustment with the hair pin. This adjustment determines the gauge wheel

Gauge Wheel (Option) Installation





2.2 False Bottom Attachment (107 Only)

The false bottom attachment allows the use of both tanks, front and back, to be used in combination for seed. This will enable the seed tanks to last longer before refilling during seeding operation.

INSTALLATION

Step 1: Remove the divider cover (Item #2) from the grain tank by unbolting and setting the cover aside.

Step 2: Insert the false bottoms right hand (RH) sheet (Item #3) by holding its handles and pushing the studs into the existing slots found just below the 6” x 24” openings in the center divider as shown in the accompanying illustration.

Step 3: Insert the false bottom LH sheet (Item #4) in the same manner as described in Step 2.

Step 4: Place the side seal retainer RH (Item #5) on the false bottom RH with the rubber seal (Item #9) fitting in the crimp space provided between the two parts (See Detail A).

Step 5: Place the side seal retainer LH (Item #6) on the false bottom LH with the rubber seal (Item #9) as in Step 4.

Step 6: Place the upper seals (Items #7 and #8) on their respective false bottoms as shown in the accompanying illustration.

Step 7: Position the false bottoms by moving them to the left or right so that l/2” exists between the false bottoms and the seed tank wall (See Detail A).

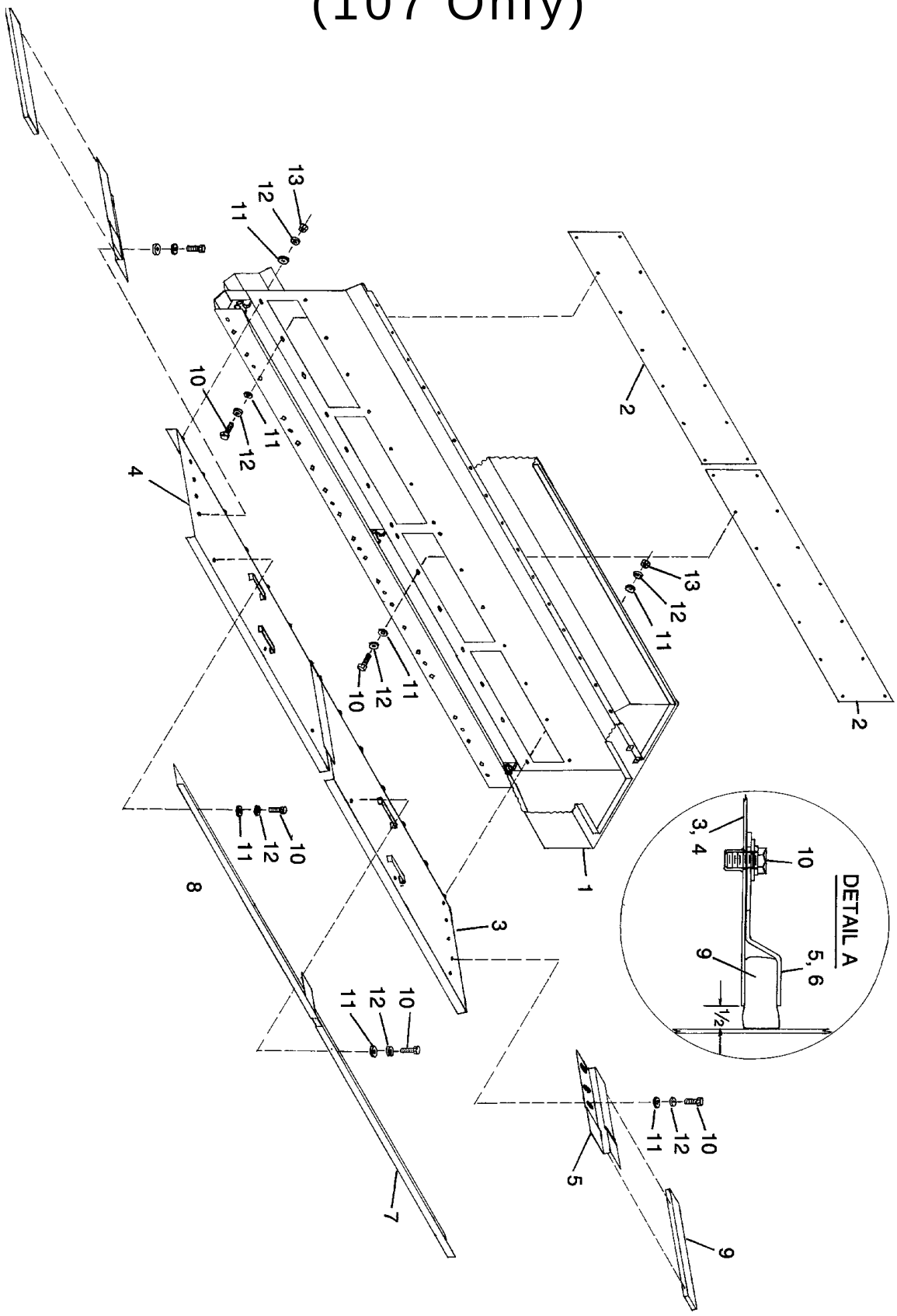
Step 8: Place all flat washer, lock washers and nuts (Items #11, #12 and #13) in their respective locations as shown in the accompanying illustration.

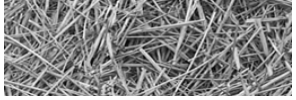
Step 9: Tighten only the false bottom nuts to secure the false bottoms to the center divider.

Step 10: Slide the upper seals and the side seal retainers firmly against their respective walls and tighten all the nuts.

The preceding steps are to be followed in the opposite fashion starting with the last step and proceeding to Step 1 to bring the drill to its original manner.

False Bottom (Option) Installation (107 Only)





2.3 Drill Legume Box Attachment

The legume box attachment features fluted-feed cups which are capable of accurately metering small seeds even at very low rates. The hopper will hold up to 150 lbs. of seed.

INSTALLATION

Step 1: Drill four 7/16" diameter holes in the front (grain) box as shown in Figure 1. Measure these holes carefully and use a good center punch to mark locations before drilling. Loosely bolt the mounting bracket to the grain box observing left hand and right hand parts.

Step 2: Remove the convoluted grain hoses and unbolt the cup assemblies from the grain tank. Replace with modified cup assemblies provided with the legume box kit. Reattach the convoluted grain hoses to the cups.

Step 3: Loosen chains, sprockets and bearings and move countershaft on grain tank. Reinstall existing bearings, sprockets and chains and install 15 tooth sprocket as shown in Figure 2.

Step 4: Bolt legume box to grain tank using the four 3/8" x 1" bolts provided. The mounts welded to the rear of the legume box should go between the mounting brackets installed in Step 1. Tighten all mounting bolts securely.

Step 5: Bolt the two bearing standards to the brackets on the legume box using six 5/16 x 3/4" carriage bolts, flat washers, lock washers and nuts. Align the bearing standards before tightening bolts. Loosely bolt the bearings to the outside of the bearing standards using the four 5/16"' x 3/4" carriage bolts. Install the 29" shaft with the 17 tooth sprocket BETWEEN the bearings as shown in Figure 2. Install two wooden block chain tightener using 3/8" x 2-1/2" bolts, two flat washers, lock washer and nuts. Tighten the drive chains.

Step 6: Cut 5/8" I.D. clear plastic hose to 22" lengths. Eighteen are required. Install hoses on the grain cups first and then on legume box cups. Dipping the ends in a liquid soap solution (one part soap to one part water) will ease installation of the hoses.

Legume Box (Option) Installation

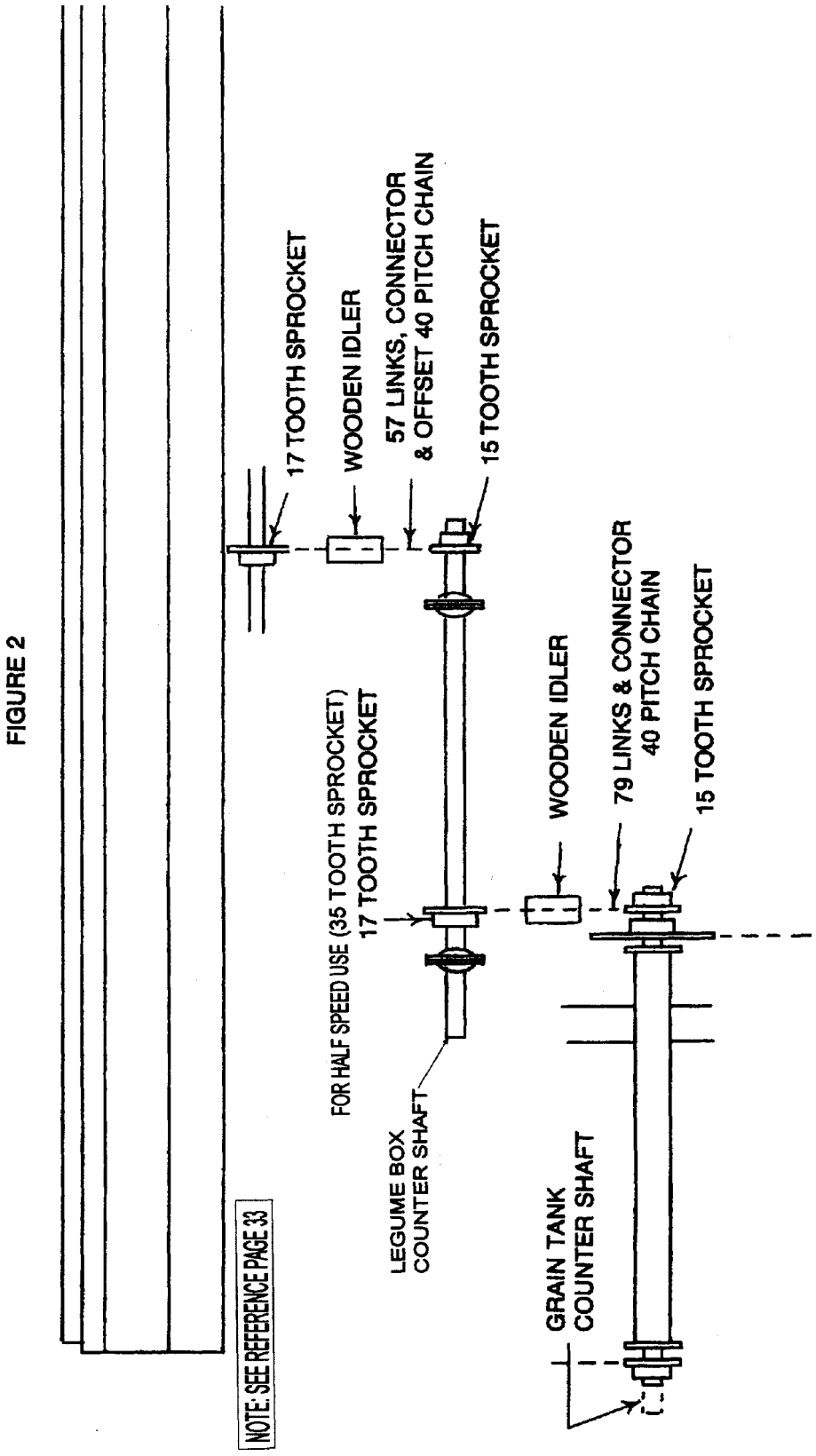
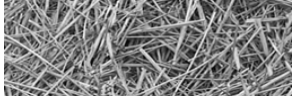
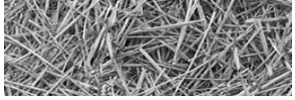


FIGURE 2



2.4 Legume Hopper Shipping Kit (Optional)

ITEM	PART NO.	QTY.	DESCRIPTION
1	8700001	1	BRKT\LEGUME\LH\LEG-BOX
2	8700002	1	BRKT\LEGUME\RH\LEG-BOX
3	8700003	4	STRAP\LEGUMEBOX
4	8700008	1	BRG\BOX\LEGUME\RH
5	8700009	1	BRG\BOX\LEGUME\LH
6	2000002	2	BRG\1" W/LOCK\COLLAR
7	2000703	4	FLGETT\1\2BOLT\PLTD
8	2000016	2	BLK\WD\IDLER
9	8700011	1	SHFT\1X29\LEGUMEBOX
10	1000111	1	SPKT\B\40\17\1\1/4KW\SOFT
11	1000112	2	SPKT\B\40\15\1\1/4KW
12	6200010	3	KEY\SQ\1/4X1
13	1100232	1	CHAIN\40NP\53
14	1100246	1	CHAIN\40NP\79
15	1100224	2	CHAIN\40NP\CL
16	1100225	2	CHAIN\40NP\OL
17	3700129	18	HOSE\PVC\5/8IDX22-1/2\CLR
18	4800098	4	BOLT\HEX\3/8X1-1/4\NC
19	4800156	4	BOLT\HEX\3/8X3
20	4800029	2	BOLT\HEX\3/8X2-1/2
21	4800003	4	BOLT\HEX\3/8X1
22	4900002	14	NUT\HEX\3/8\NC
23	5000019	14	WASH\LOCK\3/8
24	5000001	4	WASH\FLAT\3/8
25	4800153	10	BOLT\CRG\5/16X3/4\NC
26	4900003	10	NUT\HEX\5/16\NC
27	5000022	10	WASH\LOCK\5/16



Section 3: Introduction

Every effort has been made to ensure that the information contained in this manual is correct at the date of publication; but, due to continuous improvements, DuraTech Industries reserves the right to make changes in the contents without notice or obligation.

This manual is shipped with each machine to familiarize the operator with the proper operating, maintenance and lubrication instructions to insure the best possible performance and service from the machine. Study and understand these instructions thoroughly before operating the machine. We recommend that this manual be readily available for reference at all times. Consult your DuraTech Industries dealer if any items in this manual are not understood.

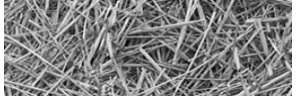
DuraTech reserves the right to make changes in engineering, design and specifications, add improvements, or discontinue manufacture at any time without notice or obligation.

3.1 Ordering Parts

When ordering parts always specify your model number, serial number, and the number of the parts you wish to order.

IMPORTANT: WHEN REPLACEMENT PARTS ARE NEEDED, USE THE LISTED PART NUMBERS AND DESCRIPTIONS TO INSURE FAST AND ACCURATE SHIPMENT OF YOUR ORDER. WHEN ORDERING PARTS ALWAYS SPECIFY UNIT SERIAL NUMBER.

ONLY AUTHORIZED PARTS SHOULD BE USED FOR REPAIR AND/OR REPLACEMENT.



3.2 Serial Number Decal

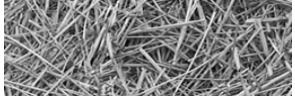
The serial number and the machine model number are stamped on the decal. The model number and serial number are important when service and/or parts are required.

3.3 About your 77/107 Grain Drill

The 77/107 Grain Drill is designed to seed No-Till, Minimum Till, or conventionally tilled fields. Two 30 gallon tanks are available for added ballast to penetrate the tough no-till conditions.

The two compartment hopper offers the flexibility of seeding with fertilizer, seeding alone, or planting two different seeds. The metering system for each hopper is infinitely adjustable.

Field hitches are available for one or multiples of two, three, and four of the model 107 Drill only. A tow hitch is also available for the 107 Drill to allow the towing of two or more drills in transport.



Section 4: Operating Instructions

To insure long life and economical operation, we highly recommend the operator of the 77/107 Grain Drill be thoroughly instructed in the maintenance and operation of the machine. There is no substitute for a sound, preventative maintenance program and a well-trained operator.

Prior to operating the Grain Drill, we recommend the operator make a visual inspection of the unit. This can be done as the lubrication is being carried out.

4.1 Operating Instructions

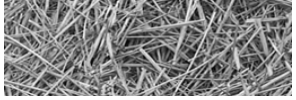
Check the following:

- ❑ Hydraulic components for leaks or damage.

WARNING: Hydraulic fluid escaping under pressure can be almost invisible and can have sufficient force to penetrate the skin. When searching for suspected leaks, use a piece of wood or cardboard rather than your hands.
If injured, seek medical attention immediately to prevent serious infection or reaction.

- ❑ Lug nuts for tightness.
- ❑ Condition of tire rims.
- ❑ Tires for proper air pressure.
- ❑ Condition of rubber convoluted hoses.
- ❑ Adjustment of all chains.
- ❑ Installation and condition of shields.
- ❑ Installation of Slow Moving Vehicle (SMV) sign, if required.
- ❑ Condition of decals.

WARNING: Before attempting to operate this machine, refer again to Section 1 (pages 3-11) for important safety information.



4.2 Grain Drill Setup

The 77/107 Grain Drill may be shipped without the hydraulic lift cylinder, since the grain drill used a standard 3” x 8” cylinder. The retracted length must be 20-1/4”, measured from the center of the mounting holes. When multiple grain drills are used, a cylinder will be required for each grain drill.

- Set the wheels on your tractor out as wide as possible for maximum stability.
- Hitch the grain drill to the tractor.
- Connect the hydraulic hoses to the tractor’s hydraulic system.

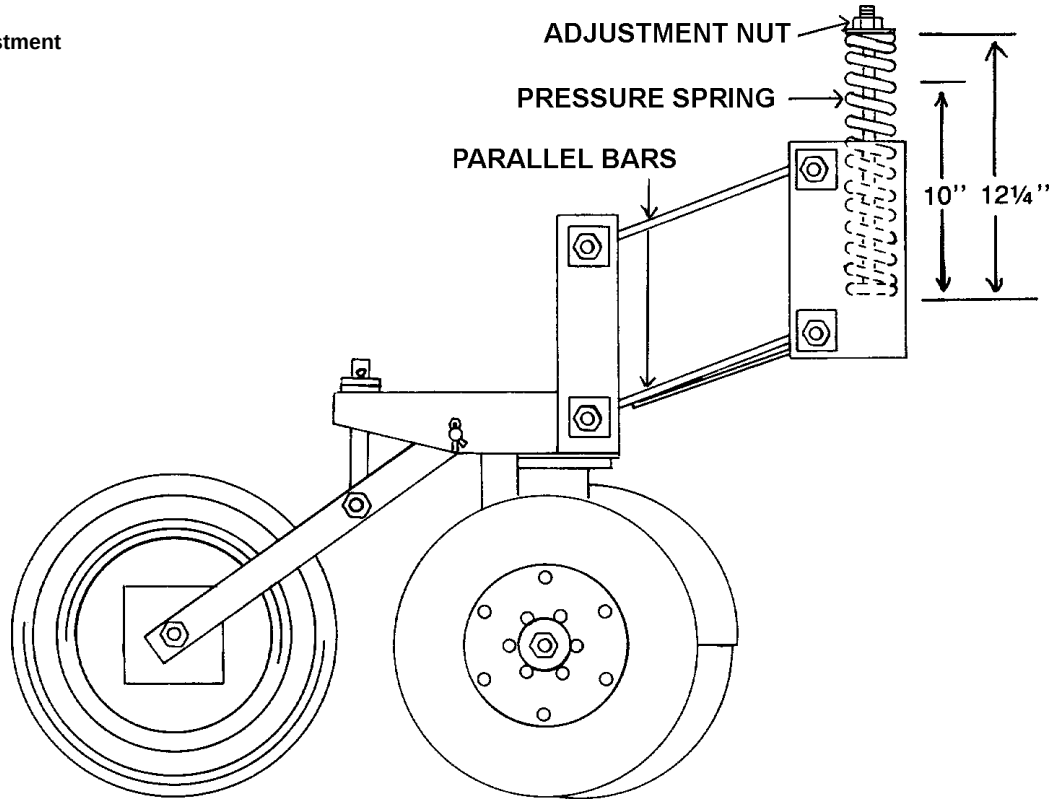
4.3 Pressure Spring Adjustment

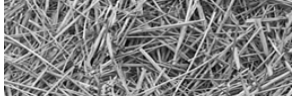
To gain versatility for all types of terrain and soil conditions, it is important to have a considerable amount of up and down travel built into each individual run. When seeding on level terrain, adjust hydraulic cylinder stroke to lower Movable Frame so openers penetrate soil approximately two (2) inches and Parallel Bars are about level when viewed from the side. The toolbar height will be about 20” when discs are new. This will allow runs to move up or down according to terrain.

If parallel bars are not level, it will be necessary to adjust pressure spring, or press wheel adjustment.

Proper tension of the pressure spring varies with conditions. No-till seeding may require more down pressure; loose soil requires less. Since the pressure springs work together with the opener depth adjustment controlled by the hydraulic cylinder, make sure that the opener depth adjustment is set correctly.

pressure spring adjustment





In extremely loose soils such as freshly worked summer fallow, it will be necessary to lessen tension on pressure spring instead of lessening hydraulic cylinder stroke.

To adjust the pressure springs:

1. Make sure the movable frame is raised completely up and the safety stop bar is secured.
2. Using the adjustment nut on each pressure spring, adjust the spring to the desired length. See table at right showing the opener pressure obtained at various spring lengths. Under no circumstances should the spring be adjusted to less than 10 inches. This may damage the spring and related parts and will also void the warranty on these parts.

SPRING LENGTH	OPENER PRESSURE
12¼ IN.	135 LBS.
11½ IN.	180 LBS.
11 IN.	205 LBS.
10½ IN.	235 LBS.
10 IN.	300 LBS.

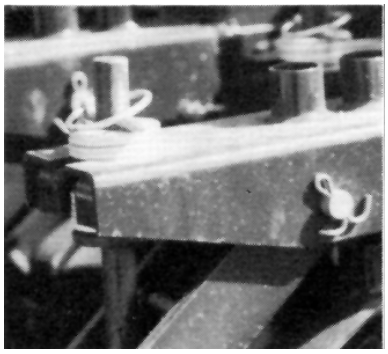
4.4 Press Wheel Adjustment

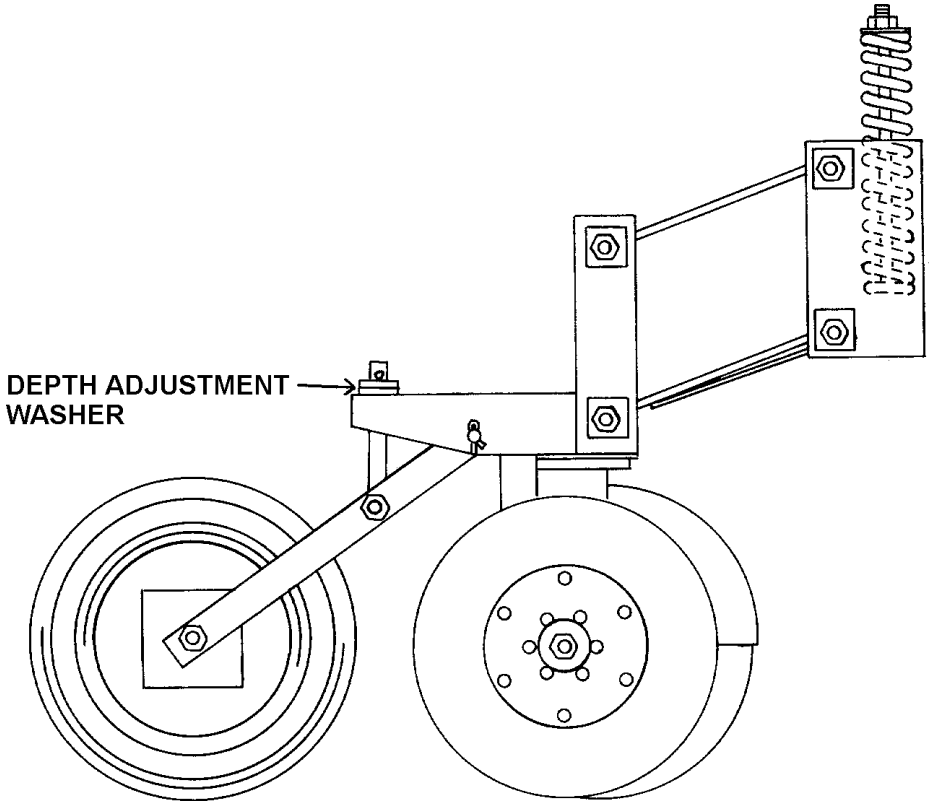
In addition to firming the soil around the seed, the press wheels serve as gauge wheels for the openers. The relationship of each press wheel and opener will remain consistent regardless of terrain or soil density. If the seed is too deep, lower the press wheel. If the seed is too shallow, raise the press wheel.

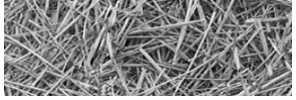
To adjust the press wheel height:

1. Remove quick attachment pin.
2. To lower the press wheel, relocate shim washers from top to bottom. To raise the press wheel, relocate shim washers from bottom to top.
3. Install quick attachment.

depth adjustment washer for serial numbers 401 and up



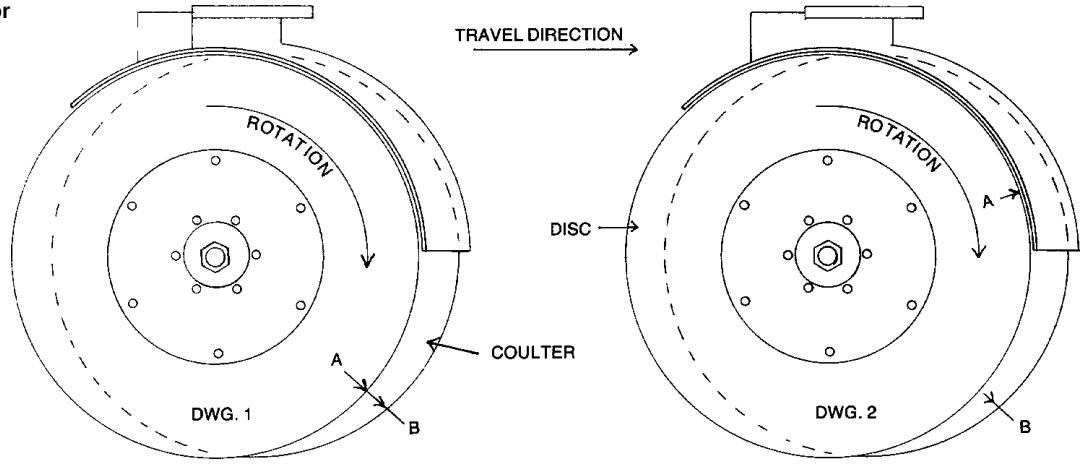




4.5 Haybuster 77/107 Drill Opener

The 77/107 Drill uses a coulter-disk offset opener. The coulter blade leads the disk by 1-1/2". Both blades are the same size and due to the offset, there is some sliding action where the blades contact. This sliding or scissor action provides excellent residue cutting action at ground level, especially in wet residue. The scissor action causes some wear into the coulter blade at the point of contact. This wear is normal and the heavier coulter blade is bolted to the bearing cage to allow easy replacement.

depth adjustment washer for serial numbers 401 and up

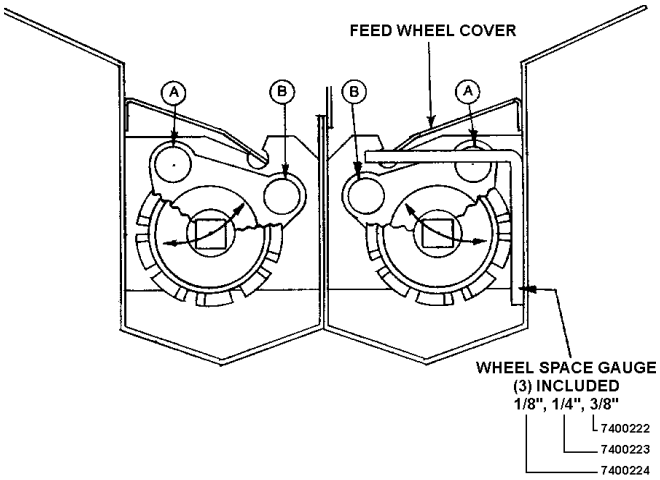


One complete turn changes points A and B (DWG. 1) the amount shown in DWG. 2. It takes 6 turns to bring points A and B back together.

4.6 Feed Wheel Space Adjustment

Large seeds require more space between feed wheel lugs and tank wall than small seeds to prevent cracking. Small seeds require less space to provide an even flow. Therefore each seed listed in the feed rate chart, pages 30 to 33, shows a required wheel space.

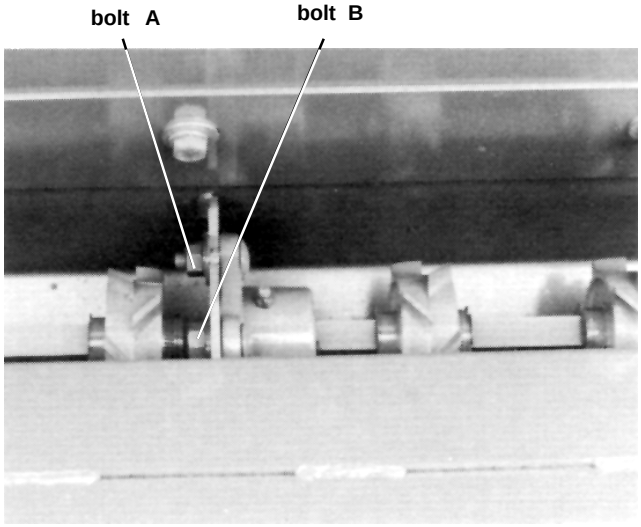
feed wheel space adjustment.



FEED WHEEL SPACE ADJUSTMENT

1. Remove the feed wheel covers.
2. Loosen the eight bolts A and B. There are four sets of bolts for each feed wheel - two on the outer end of the hopper and six inside the hopper.
3. Select the proper space gauge using the wheel space chart.
4. Install the proper space gauge as shown.
5. Slide the feed wheel toward the gauge until the feed wheel lugs, gauge and hopper are pressed together. Tighten the eight bolts.
6. Recheck the feed wheel space adjustment.
7. Install the feed wheel covers.

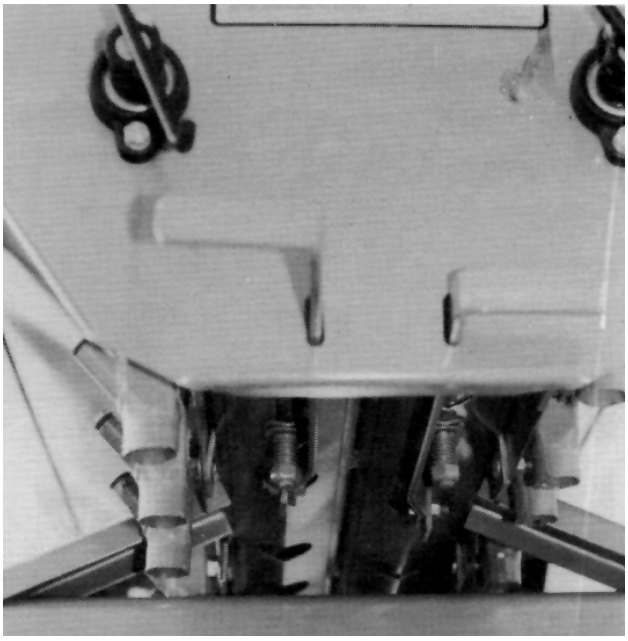
The feed wheel space adjustment provides the proper clearance for the type of seed or fertilizer being used.



one set of feed wheel space adjustment bolts

4.7 Drill Cleanout Slides

Cleanout slides are provided on both grain and fertilizer tanks. Handles for opening and closing the slides are located on the left side of the drill.



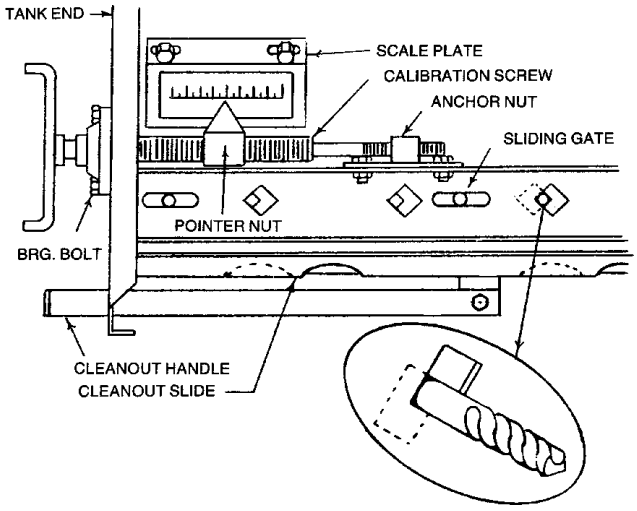


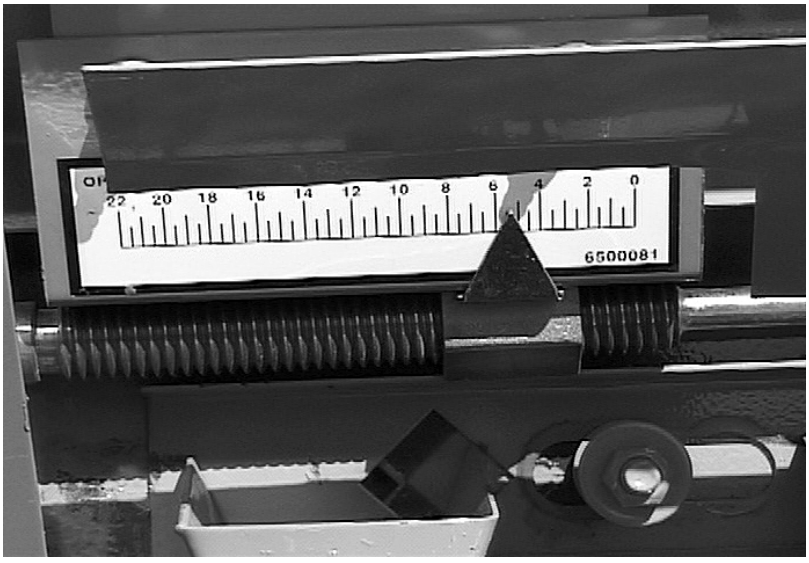
figure 4.1
drill cleanout slides.

4.8 Calibration Pointer Adjustment

Grain and fertilizer sliding gates are preadjusted at the factory. In the event any part of the calibrating mechanism is removed or replaced, it can be recalibrated in this order:

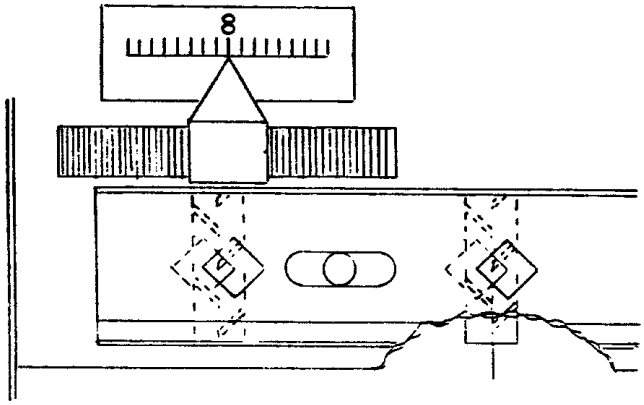
1. Place both pointer nut and anchor nut in the center of their respective thread.
2. Insert a short length of 7/16” rod or the shank end of a 7/16” drill bit into the square hole in sliding gate as shown.(figure 4.1)
3. Tighten bearing bolts securing calibration screw to end of tank.
4. Tighten bolts securing anchor nut to sliding gate.
5. Place scale plate on tank so number 8 is directly in line with top of pointer. This will insure pointer setting to coincide with chart. Scale plate must be parallel with calibration screw to allow pointer to operate smoothly along plate.

calibration pointer adjustment



4.9 SETTING AND CHECKING FEED RATE

general setting for feed wheel alignment



For most seeding, the feed wheel should be aligned as shown above. Set the pointer on number 8. The center of the feed wheel should be centered in the opening as viewed from outside of the box.

The rates shown on the charts serve only as a starting point. Due to variations in material size and density the rates may vary from the chart. The following methods may be used to determine the proper setting for your particular seed or fertilizer.

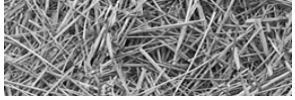
Setting and checking feed rate using wheat as an example.

1. You want to seed wheat at a rate of 95 lbs. per acre on 7" spacing.
2. Seed rate charts calls for a wheel space of 1/8" (page 30). Pointer set on 8 (see illustration above). The adjustment should be made before filling grain tank.
3. Make sure feed wheel cover is in place. Put grain in tank.
4. Seed far enough so you can visually check grain flowing into seed cups.

The addition of the single agitator to the standard drill box will prevent these seeds from bridging above the feed wheels. The single agitator may be added to all 77/107 drills.

Alti wildrye
Bromegrass #
Intermediate wheatgrass
Killdeer sideoats #
Pubescent wheatgrass
Streambank wheatgrass
Tall wheatgrass
Western wheatgrass

Extremely trashy samples may require the double agitator.



4.10 CHECKING FEED RATE

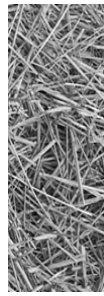
1. Measure a distance of 415’ on a drill with 7” spacing and mark. Remove one hose from seed hopper on each drill. Attach a container (cloth or plastic bag) to hopper to collect seed.
2. Operate drill at intended planting speed through entire length of test track.
3. Weigh the sample in ounces (less weight of sample container). Use the following formula to determine lbs./acre for your particular shank spacing.

7” Spacing - oz. x 11.25 = lbs./acre

EXAMPLE

Sample and container weighs	9.9 ounces
Container weighs	- 1.5 ounces
Weight of sample only	8.4 ounces

4. Use formula No. 1 to figure pounds per acre. 8.4 ounces x 11.25 = 94.5 pounds per acre.
5. To calibrate a seed not shown on the chart or a mix of different seeds, compare to a similar charted seed to obtain a trial setting. Recalibrate as necessary.
6. The same method may be used to determine fertilizer rates.



Series 100
Spacing 7”
Model No. 77/107

CHART FOR DRILLING GRAIN IN POUNDS PER ACRE

POINTER SETTING

POINTER SETTING	**		3		4		5		6		7		8		9		10		11		12		13		14		15		16
WHEAT	1/8					13	21	29	39	50	63	78	95	111	126	150	173	199	218	250	284								
BARLEY	1/8									22	29	36	46	55	63	74	90	104	117	133	153	176	198						
OATS	1/8										8	11	15	20	25	32	38	48	59	70	82	96	120	133	144	150	163	171	172
RYE	1/8						15	22	30	40	50	63	78	92	106	124	143	164	185	208	235								
SOYBEANS	3/8								17	20	26	35	46	58	68	82	96	115	129	145	171	186	215	243	275	306	334	357	364
BUCKWHEAT	1/8						16	22	29	38	49	62	74	87	102	120	138												
SORGHUM OR VETCH	1/8			4	5	9	13	21	27	35	44	56	67	78	93														
ALFALFA OR RAPE	1/8	3	8	13	19	27	35	48	59																				
MILLET	1/8	5	8	15	22	30	40	53	66																				
FLAX OR SUDAN GRASS	1/8			5	7	10	17	24	30	38	49	62	73																
ORCHARD GRASS	1/8						1	2	3	4	5	7	9	11	14	17	20	23	26										
FESCUE	1/8						5	6	8	12	14	19	23																
SWITCH GRASS	1/8	3	7	12	19	24																							
SUNFLOWER (#3 6500/LB.)	1/8						3	5	6	8	10	14	18	21	26	31	37												
FERTILIZER	1/8	3	6	11	17	24	35	49	62	77	93	116	138	160	185	212	240	275	306	324	353	370	384	393	406	414	420	425	
18-46-0																													

***** = indicates wheel spacing***

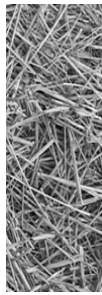
100 DRILL DETERMINING SEED POPULATION

The 107 Drill seeds 10.50’ / 126” per pass; the 77 Drill seeds 7’/ 84” per pass.
The 107 Drill travels 4149 feet to seed 1 acre; the 77 Drill travels 6223’ to seed 1 acre.

Following is the lineal feet of seeded row to seed 1 acre.

7” rows - 74,700 ft/acre

EXAMPLE:
150,000 bean plants desired per acre on 7” row spacing
150,000 divided by 74,700 = 2.0 beans per ft.
10 ft. of row - 20 beans.



Spacing 7 Inch

CHART FOR DRILLING GRAIN IN POUNDS PER ACRE

POINTER SETTING

POINTER SETTING	**		3		4		5		6		7		8		9		10		11		12		13		14		15		16
BAHIA GRASS	1/8	2.5	5.5	10.3	16.1	24.6	34.2	44.5	53.7	63.9	77.7	89.9	102.0	115.0	131.0	145.0													
BUFFALO GRASS*	1/8						2.5	3.8	5.3	6.7	8.6	10.9	13.9	16.0	18.8	21.7	26.1		34.0		42.7		54.8		65.8		73.4		
FESCUE	1/8						4.5	6.3	8.1	11.7	14.4	18.9	22.9	27.4	32.0	36.4	42.2	56.5	66.5	75.9									
GREEN	1/8			3.6	4.8	6.8	9.3	12.1	14.7	17.7	20.7	24.5	28.5	31.3	34.7	40.0	43.7	50.3	54.8	60.9	69.3								
ORCHARD GRASS	1/8						1.3	2.0	2.7	4.1	5.4	7.2	9.0	11.3	13.5	16.7	19.8	22.7	25.6	30.1	34.6	40.2	45.8						
RYEGRA55	1/8				3.1	4.5	6.7	9.4	13.5	16.6	21.1	27.0	33.7	37.7	45.4	53.0	61.1												
*FEED COVER OFF																													

**** = indicates wheel spacing***

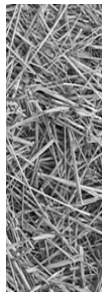
Spacing 7 Inch

CHART FOR DRILLING GRAIN IN POUNDS PER ACRE

POINTER SETTING

POINTER SETTING	**		1		2		3		4		5		6		7		8		9		10		11
ALFALFA	1/8			0.4	1.3	3.6	8.1	13.9	19.8	27.0	35.5	48.5	57.5	71.1	85.8								
KENTUCKY BLUEGRASS	1/8					0.7	1.6	2.9	4.4	6.3	8.8	12.1	16.1	20.4	25.1	30.8	37.5	44.1	50.0	57.3	65.2		
LADINO CLOVER	1/8				1.0	3.4	8.1	15.5	25.0	35.2	46.4	59.8											
LESPEDEZA (KOREAN)	1/8					1.1	4.7	8.3	12.4	17.3	23.6	31.3	39.8	49.2									
RED CLOVER	1/8				1.3	4.3	9.5	16.4	24.3	32.8	43.4												
RED TOP	1/8					0.9	1.9	3.5	5.5	7.6	10.5	14.8	20.1	25.8	31.6	38.3	46.2	54.1	60.9	69.7	82.6		
REED CANARYGRASS	1/8						0.9	2.3	3.8	5.5	7.9	10.9	14.0	17.2	20.6	24.8	29.4	33.9	39.1	44.7	50.6		
SERECIA (UNHULLED)	1/8					1.0	2.7	4.7	7.4	10.6	14.1	19.0	25.0	30.8	37.1	45.2	54.2						
SWEET CLOVER	1/8				2.7	7.2	14.4	23.4	33.5	44.5	58.9	77.3	97.5										
SWITCHGRASS	1/8				0.9	2.7	7.2	12.1	17.5	24.3	34.1												
TIMOTHY	1/8			0.9	3.6	8.5	15.3	22.9	30.6	39.5	53.0												
LOVEGRASS	1/8			1.0	3.4	8.3	15.5	23.4	33.5	44.5	57.5												

**** = indicates wheel spacing***



Spacing 7 Inch

CHART FOR DRILLING GRAIN IN POUNDS PER ACRE

POINTER SETTING

POINTER SETTING	**		3		4		5		6		7		8		9		10		11		12		13		14		15		16
ALTI WILDRYE	1/8										3.1		5.7		7.6		12.7		18.5		27.1		36.2		46.4		47.4		49.8
BROMEGRASS*	1/8														3.6		5.3		7.5		10.2		13.6		16.5		20.0		20.7
INTERMEDIATE WHEATGRASS	1/8										5.8		8.1		12.1		19.3		28.3		35.0		49.8		55.2				
KILLDEER SIDEOATS*	1/8										2.5		3.8		5.5		7.4		9.6		11.8		14.0		16.4		19.3		22.5
PUBESCENT WHEATGRASS	1/8										4.9		12.6		19.3		28.5		39.7		53.4		69.9		81.1		86.1		
STEAMBANK WHEATGRASS	1/8										2.9		4.5		7.1		10.3		13.4		20.0		27.2		33.4		35.1		
TALL WHEATGRASS	1/8										5.8		8.5		12.1		18.4		25.2		32.3		43.1		53.9				
WESTERN WHEATGRASS	1/8										2.7		4.4		7.3		10.8		15.3		19.9		25.0		30.4		35.5		39.8

*DOUBLE AGITATOR MAY BE REQUIRED FOR EXTREMELY TRASHY SAMPLES

***** = indicates wheel spacing***

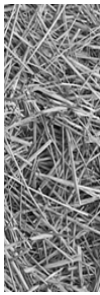


CHART FOR DRILLING LEGUMES AND SMALL GRASSES IN POUNDS PER ACRE

LEGUME BOX ATTACHMENT FOR 77/107 DRILL ON 7" SPACING

NOTCHES ON INDEX	LBS. BU.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
ALFALFA; RED, ALSIKE, LADINO CLOVER; VETCH	62	2.2	4.7	7.7	10.7	13.6	17.0	20.4	23.9	27.3	30.9	31.7	37.9	41.3	44.7	47.6	50.6
SWEET CLOVER	64	2.3	5.1	8.4	12.4	17.4	22.5	26.4	30.9	37.1	41.6	46.7	51.2	56.3	59.6	63.0	66.4
BIRDSFOOT TREFOIL	64	2.3	4.5	7.9	10.7	14.1	17.4	21.4	25.3	28.1	32.1	36.0	39.4	42.2	46.7	50.1	55.1
MILLIT, TIBBET CLOVER	60	2.1	4.9	7.7	10.7	14.3	17.4	21.2	26.1	28.5	30.9	35.5	39.4	42.8	46.7	51.0	55.9
UNHULLED SERICEA	36	1.1	2.8	4.5	6.8	9.6	11.8	14.6	17.4	20.3	23.1	26.4	28.7	31.5	33.8	36.0	40.5
UNHULLED LESPEDEZA	46	1.7	3.9	5.6	8.4	11.8	15.2	18.0	21.9	25.3	28.7	32.6	35.4	38.3	41.6	45.0	50.1
BAHIA GRASS	46	1.1	2.8	5.1	6.2	8.4	10.7	11.8	14.6	16.9	18.6	20.8	22.5	24.2	25.9	27.6	28.1
LOVEGRASS	64	2.3	5.1	7.9	11.3	16.3	20.3	24.2	28.7	32.6	36.6	42.2	46.7	51.2	55.1	57.9	60.2

NOTCHES ON INDEX	LBS. BU.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TIMOTHY	50	1.7	3.9	6.2	9.6	12.9	16.9	20.9	24.8	28.1	32.6	37.1	40.5	44.4	46.7	49.5	54.6
SWITCHGRASS	55	2.3	4.5	6.8	9.6	12.4	15.8	18.6	20.8	24.2	28.1	30.9	33.8	37.1	39.9	42.2	47.8
FLAX SESAME	55	1.4	3.7	6.2	8.7	11.6	14.7	17.5	20.6	23.1	26.5	29.6	32.4	35.5	37.9	40.5	44.5
RAPE MUSTARD	53	1.7	4.2	7.4	10.2	12.9	16.4	19.2	22.5	25.6	28.2	31.8	34.9	37.7	40.5	43.3	45.9
ORCHARD GRASS	17		0.8	1.7	2.8	3.4	3.9	5.1	5.6	6.8	7.3	8.4	9.0	10.1	10.7	11.3	11.9
PERENNIAL RYEGRASS	31		2.3	3.4	5.6	7.3	9.0	10.7	11.8	13.5	15.2	16.9	18.6	20.8	21.9	23.1	24.8
FESCUE	27		1.1	2.8	3.9	5.6	6.8	8.4	9.6	11.3	12.4	13.5	15.2	16.9	18.0	19.1	21.9
COMMON BERMUDA GRASS		2.7	5.0	7.4	10.6	14.3	17.6	20.8	25.1								

SEED MIXTURES

SELECT THE SETTING FOR THE DESIRED QUANTITY OF EACH SEED.

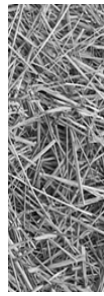
ADD INDIVIDUAL SETTINGS.

EXAMPLE:

	LBS/ACRE	NOTCH
ALFALFA	5	2
SWEET CLOVER	5	2
TIMOTHY	2	1
TOTAL		5

WHEN USING HALF SPEED DRIVE DIVIDE CHARTED RATES BY TWO. REPLACE 17 TOOTH SPROCKET ON COUNTERSHAFT WITH 35 TOOTH. (SEE MANUAL FOR DETAILS.)

DENSITY OF THE SAMPLES USED TO PREPARE THIS CHART ARE GIVEN IN THE FIRST COLUMN TO THE RIGHT OF THE CROP NAME IN POUNDS PER BUSHEL.



Spacing 7 Inch

CHART FOR DRILLING GRASS IN POUNDS PER ACRE

			SPROCKET A	12	14	12	18	14	12	14	18	24	18	24	24
			SPROCKET B	24	24	18	24	18	14	12	14	18	12	14	12
			REV. PER ACRE	154	180	205	231	240	264	359	396	411	462	528	616
GRASS NAME	**DENSITY**	**WHEEL SPACE**	**POINTER**												
BLUE GRAMMA	9 LB/BU	1/8"	14	6.8	7.9	9.3	10.1	10.6	11.8	14.8	15.8	17.4	19.3	23.3	25.3
			17	9.5	11.3	13.3	14.1	15.7	16.5	19.4	19.9	22.5	24.8	27.9	31
			22	11.3	12.5	13.5	15.3	17	18.8	19.9	20.5	21.1	24.5	28.5	31.1
BIG BLUESTEM	9 LB/BU	1/8"	14	4.9	5.7	6.2	6.7	7.8	8	11.2	11.4	12.1	15	15.4	19
			17	9.3	10.8	12.5	12.6	17.4	19	24.2	25.5	26	29.4	33.3	34.1
			22	15.7	19.2	19.9	21.4	22.7	23.6	26.5	29.7	30.7	36.5	38.8	41.4
INDIANGRASS	13 LB/BU	1/8"	17	9.2	10.9	11.5	13.8	14.5	14.6	15.5	20.4	21.2	22.3	23.2	26.4
			22	17.5	20	21.4	21.8	22.9	23.8	24.4	24.5	27.3	28.8	30.1	31.1
LITTLE BLUESTEM**	9 LB/BU	1/8"	22	3.2	3.3	4.2	5.4	7.5	8.3	9.4	9.8	10.5	10.8	11.4	13.5
PRARIE SANDREED**	13 LB/BU	1/8"	22	5.5	5.6	8.5	8.6	9.2	10.5	13.3	15.8	16	18.6	20	22.1

***** = FOR BEST RESULTS OBTAIN THE MOST TRASH-FREE SEED AVAILABLE.***

Also see information in section 5.4

4.11 Drilling with the Grain Drill

If the grain drill was transported using the optional end hitch, the rear wheels will need to be rotated as follows:

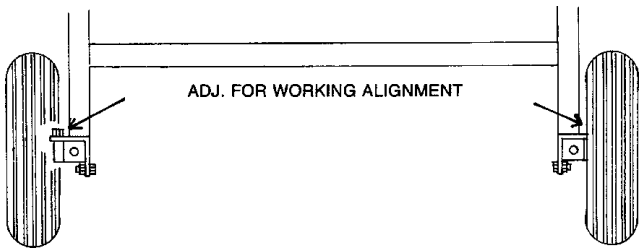
1. Use the hydraulic system to lower the openers onto solid soil or use a jack to raise the drill frame and remove the weight from the rear wheels.
2. Remove the bolts from each wheel.

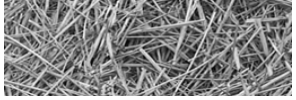
rotating the wheels for drilling (wheel shown in drilling position)

3. Rotate the wheels 90° and insert bolts.

NOTE: Step 4 covers alignment of the wheels. Once this adjustment is set, it should not normally be necessary to readjust it. Alignment of the wheels in the working position is less critical than in the transport position because of the softer surfaces and slower speeds.

4. Using a tape measure, align the wheels so that they are parallel with each other and the frame as shown below. Adjust and secure the stop bolt #2.





5. Tighten the bolts.
6. Remove the jack, if used.
7. After the tractor is hitched to the front hitch, move the drill ahead slowly until the front swivel wheels are properly positioned.

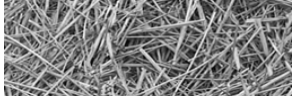
At this point the grain drill should be properly set up and adjusted according to the instructions in the preceding sections.

Load the tanks with seed and/or fertilizer. Rotate the drive wheel by hand to make sure that the feed wheel shafts are free to turn. This is particularly important if the drill was transported with fertilizer and seed in the hoppers.

Start the tractor, retract the cylinder completely, and begin drilling.

Periodically check for proper seed depth and feed rate.

When the seeding operation is finished, park the drill over a sheet of plastic, canvas, etc. Pull one of the cleanout side control levers out to empty the remaining seed or fertilizer. Collect the seed or fertilizer. Repeat the procedure for the other hopper.



4.12 SUGGESTIONS

When preparing to sow damp fertilizer that has been sitting in the tank for several hours, stir the fertilizer all the way to the bottom to break up any blocks of fertilizer which have become cemented together.

The amount of fertilizer sown will vary with the moisture content and quality of the fertilizer.

4.13 REAR WHEEL SWIVEL AND ADJUSTMENT

Both rear wheels are designed to swivel 90° for the purpose of transporting drills endways. Adjusting bolts are provided for aligning wheels in transport position as well as in forward position. Transport position is most critical for tire wear due to hard surface roads and faster speeds.

CAUTION: Transporting drills with seed and fertilizer in the tanks is not recommended. If drills are moved any distance with seed or fertilizer in tanks, either in transport or field position, materials will settle around feed wheels. Before starting to seed, operator should check with a wrench on drive end of feed wheel shaft to make sure they are free to turn. Shaft may be turned either clockwise or counterclockwise with openers in raised position.

WARNING: Maximum transport speed should never exceed 20 M.P.H., and should be less where conditions demand.

4.14 TRANSPORTING THE GRAIN DRILL

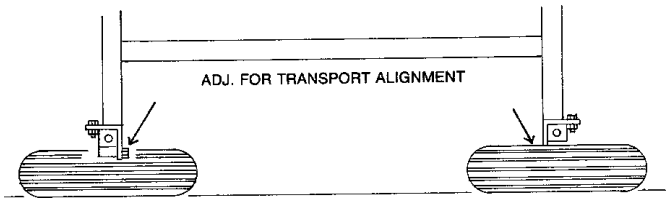
The rear wheels swivel 90° to transport the drill end ways with the optional end hitch. These wheels must be carefully aligned before transporting the drill because of the hard surfaces.

To rotate the rear wheels:

1. Use the hydraulic system to lower the openers onto solid soil or use a jack to raise the drill frame and remove the weight from the rear wheels.
2. Remove the lock bolts from each wheel.
3. Rotate the wheels 90° and insert the lock bolts.

NOTE: Step 4 covers alignment of the wheels. Once this adjustment is set, it should not normally be necessary to readjust it.

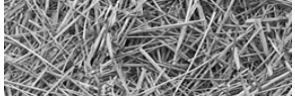
4. Using a string, align the wheels as shown. Adjust and secure the stop bolts.
5. Tighten the lock bolts.
6. Raise the openers or remove the jack. Secure the torque bar in the transport position with the safety stop bar.



rear wheel alignment - transport position

7. After the tractor is hitched to the end hitch, move the drill ahead slowly until the front swivel wheels are properly positioned.

rotating the wheels for drilling (wheel shown in drilling position)



4.15 PREPARING FOR STORAGE

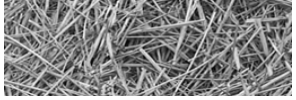
To prepare the 77/107 Drill for storage, perform the following steps:

1. Install safety stop bar to keep planting units off the ground and to minimize rusting. Before drill is stored, clean out slides should be opened to remove as much seed and fertilizer as possible. Both tanks should be flushed out thoroughly to prevent any caking of seed or fertilizer. Open and close slides while flushing to allow any fertilizer that might be under the calibration slide to work its way free. Fertilizer can be damaging if left in contact with metal parts for a prolonged period.
2. Clean all mud, dirt, grease and other foreign material from the exterior of the machine. Wash the complete machine. Repaint places where bare metal is exposed - this will inhibit rusting.
3. After inside of the tank is thoroughly dry, apply a coat of oil or diesel fuel to calibration slide, bearings and other parts that have been in contact with fertilizer or seed.
4. Remove the chains and wash them in solvent. Using a clean cloth, wipe off the chains. Soak the chains in engine oil. Drain off the excess oil and install the chains on the grain drill.
5. Coat all chains and exposed hydraulic cylinder rod with a Valvoline Tectyl 506 oil or equivalent.
6. Lubricate machine thoroughly according to the lubrication instructions.
7. Drain water from ballast tanks, if installed.
8. If possible, store the machine in a dry, protected place. If it is necessary to store the machine outside, cover it with plastic, waterproof canvas, or other suitable protective material.
9. Check the machine for any worn or broken parts. By ordering parts now, you will avoid delays when it is time to remove the machine from storage. When ordering parts always specify machine serial number and the part number of the replacement part. Part numbers can be found in the Parts List Manual.

4.16 REMOVING FROM STORAGE

To remove the 77/107 Drill from storage, perform the following steps:

1. Remove all protective coverings.
2. Remove all excess oil from chains and cylinder rods. Lubricate machine in accordance with lubrication instructions found in this manual.
3. Check all hydraulic hoses for deterioration and, if necessary, replace. Tighten any loose bolts, nuts and hydraulic fittings.
4. Follow prestarting inspection.



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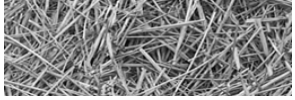


Section 5: Grass Seeding Reference

All Haybuster 77/107 Grain Drills are very versatile. These base drills are capable of accurately metering most common seeds and fertilizer. The seed will be placed at the correct depth in conventional and minimum tillage and most zero-tillage situations. Through the use of special attachments, Haybuster 77/107 Grain Drills can be used for seeding of various types of grass seeds including small-seed legumes and chaffy native grasses. When grass seeding is complete, each of these drills are capable of seeding and fertilizing your conventional crops. For more information on operating the drill, settings and procedures, please see **Section 4: Operating Instructions**.

5.1 Grass Seeding Attachments

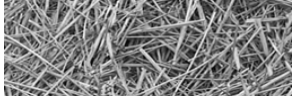
The following attachments are available for grass seeding:

- Legume box
- Single agitator
- Double agitator
- 2" I.D. seed tubes
- Depth bands

Many grasses can be metered through the standard seed box with no additional equipment. However, some of the grasses listed below can be metered more accurately by using some of the special attachments listed on the following pages.

*Alfalfa	*Alsike clover	@Altiwild rye	*Bahiagrass
*Birdsfoot trefoil	@Bromegrass	Buffalograss	Fescue
Green needlegrass	@Intermediate wheatgrass	*Kentucky bluegrass	@Killdeer sideoats
*Ladino clover	*Lespedeza (unhulled)	*Lovegrass	Orchard grass
@Pubescent wheatgrass	Ryegrass	*Red clover	*Red top
*Reed cararygrass	*Serecia (unhulled)	*Sweet clover	*Switchgrass
@Streambank wheatgrass	*Timothy	@Tall wheatgrass	@Western wheatgrass

* See legume box section, page 40
@ See single agitator section, page 40



5.2 Legume Box Applications

The legume box attachment is designed to accurately meter the small seeds listed below.

Alfalfa	Alsike clover	Bahia grass	Birdsfoot trefoil
Fescue	Kentucky bluegrass	Ladino clover	Lesoedeza (Korean)
Lovegrass	Orchard grass	Red clover	Red top
Reed canarygrass	Rye grass	Serecia (unhulled)	Sweet clover
Switchgrass	Tibbet clover	Timothy	Vetch

For more information please see the Chart for drilling legumes and small grasses on page 33.

5.3 Single Agitator Applications

The addition of the single agitator to the standard drill box will prevent these seeds from bridging above the feed wheels.

Alti wildrye	Bromegrass #	Intermediate wheatgrass
Killdeer sideosts #	Pubescent wheatgrass	Streambank wheatgrass
Tall wheatgrass	Western wheatgrass	

 # Extremely trashy samples may require the double agitator.

For more information please see the Chart for drilling grain on page 32.

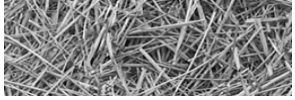
5.4 Special Instructions **for Warm Season Grasses**

Warm season grasses tend to be very low bulk and are very trashy or chaffy in appearance. Special equipment required to properly meter these grasses is listed below.

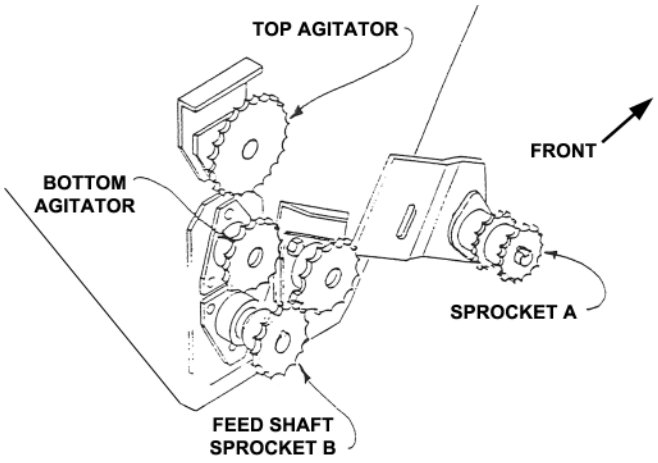
- Double agitator (top and bottom)
- Larger opening in drill box (1-1/2 inch)
- 2 inch I.D. grass tube kit
- Sprocket set (feed shaft speed adjustment)

Obtain the best quality seed available for best results. Trashier samples may need to be blended with heavier seed to improve metering capabilities. Center the feed wheels as shown on page 25. Be sure to check the feed wheels as shown on page 25.

Blue grammagrass	Big bluestem	Indian grass	Little bluestem	Prairie sandreed



To obtain the desired seeding rate of the chaffy native grasses it may be necessary to adjust the feed shaft speed. The charts on page 34 list the sprocket combinations and relative speed in revolutions per acre. Use these charts as a guideline in choosing the correct sprocket combinations. On a standard drill box, sprocket A has 14 teeth and sprocket B has 18 teeth. There are 12 tooth and 24 tooth sprocket included in the shipping kit for the native grass attachment.



5.5 Pure Live Seed Calculations

Any sample of bulk seed always has a certain percentage of non-viable seed and inert matter. In cereal grains, this percentage is quite small and can usually be ignored when determining seeding rates. Grass seeds can have a very high percentage of dormant and non-viable seed, and inert matter. These high percentages must be considered when determining grass seeding rates.

For example: You wish to plant Big Bluestem (Chart pg 34) at a rate of 12 ponds of pure live seed (pls) per acre.

A typical grass seed tag might appear as follows:

Big Bluestem

Weed seed……..0.10%	Lot No…….83101
Noxious weed seed…….0.00%	Germ……52.0%
Other crops……..0.05%	Date of test……3-86
Inert matter……40.05%	Grown……Kansas

Step 1. Determine the total percentage of inert matter from the seed tag

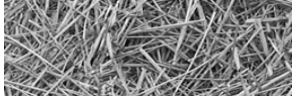
Weed seed	0.10%
Noxious weed seed	0.00%
Other crops	0.05%
Inert matter	40.05%
	40.20%

Step 2. Subtract the percentage of inert matter from 100% to find pure seed percentage.

100.0% - 40.20% = 59.80%

Step 3. Divide the pounds of pure live seed desired by the percent pure seed.

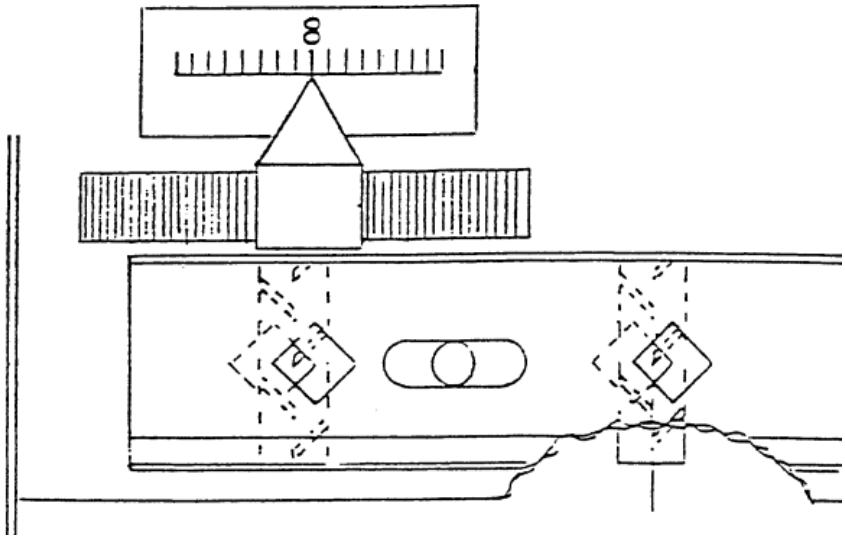
12 lbs pls/0.5980= 20.07 lbs pure seed



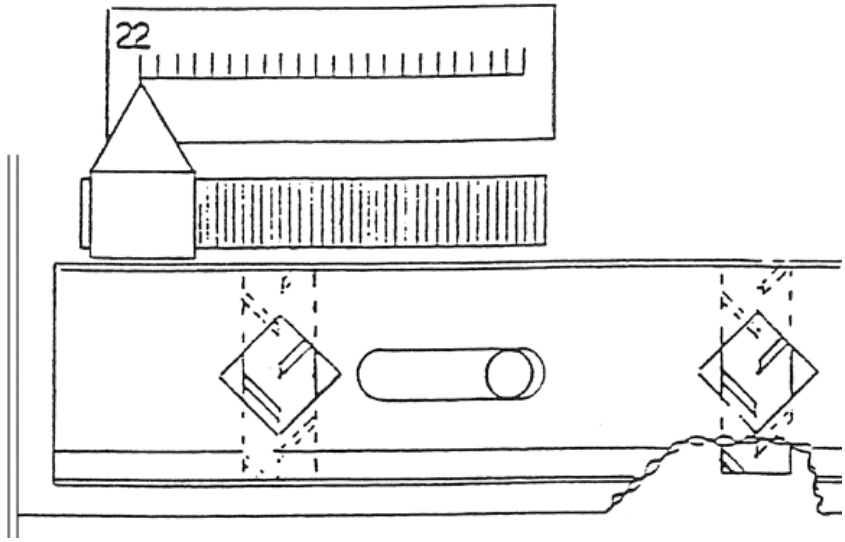
Step 4. Divide pounds of pure seed by the germination percentage to get bulk seed.

20.07/0.52 = 38.6 lbs of bulk seed

So 38.6 lbs of bulk seed per acre must be sown to get 12 lbs of pure live seed per acre.



For most seeding, the feed wheel should be aligned as shown above. Set the pointer on number 8. The center of the feed wheel should be centered in the opening as viewed from outside of the box.



When seeding the grasses listed on page 34, move the feed wheel as shown above. Set the pointer on number 22, the center of the feed wheel should be centered in the opening as viewed form outside of the box. Generally, a small screwdriver or similar tool may be inserted through the opening into the tank and used to push the wheel into position. The agitator blades inside the drill box may need to be re-centered over the feed wheels to prevent interference.

Section 6: Lubrication

All 77/107 Grain Drills are completely serviced at the factory before shipping. However, the operator should make a check of all grease fittings on the unit before beginning to operate it so as to become familiar with their location and the correct service schedule.

Use only a high quality, multi-purpose grease when lubricating the unit. Make sure all fittings and the nozzle of the grease applicator are clean before applying the grease. If any grease fittings are missing, replace them immediately.

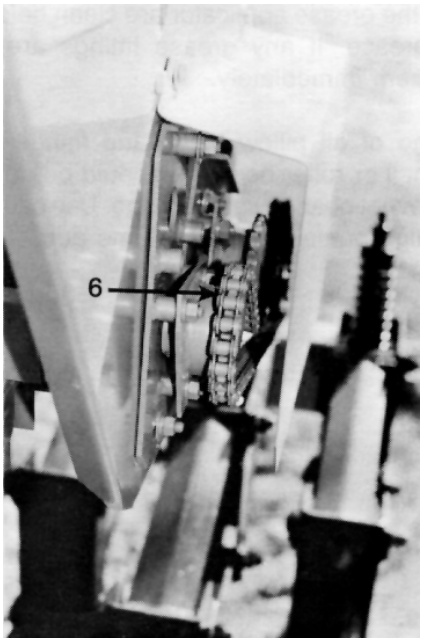
Lubricating of all pillow block and flange-type self-aligning ball or roller bearings should be done slowly to help prevent bearing seal damage. Use caution when using a high pressure, high volume gun.

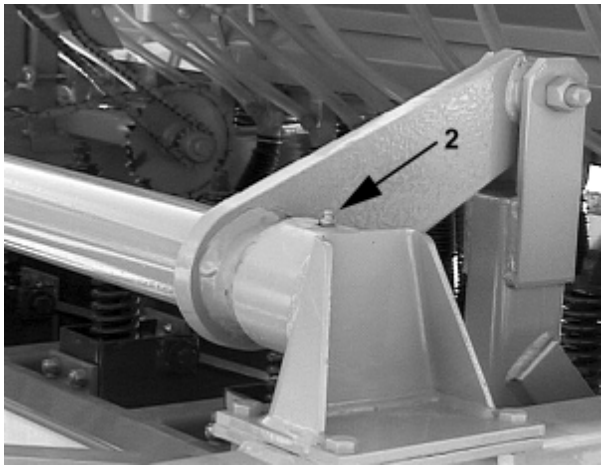
Description	Type	Frequency	No. Zerks
1. Swivel Wheel Pivot	Grease	20 Hrs.	2
2. Torque Tube Bushings	Grease	40 Hrs.	2
3. Universal Joints	Grease	40 Hrs.	2
4. Square Drive Line	Grease	40 Hrs.	1
5. Feed Wheel Shaft	Grease	100 Hrs.	6
6. Roller Chains	Oil	Daily In Dusty Conditions	
7. Tool Bar Bushing	Grease	20 Hrs.	2
8. Lift Arm Bushing	Grease	20 Hrs.	2
9. Lift Arm	Grease	20 Hrs.	2
10. Drive Wheel Frame	Grease	20 Hrs.	2

11. Packer Wheel Bearings and Coulter-Disk Bearings are Non-Relubable.

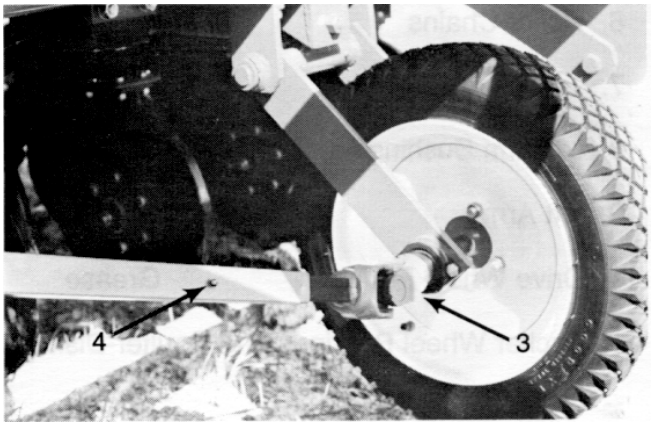
swivel wheel pivot lubrication zerk

torque tube bushings lubrication points

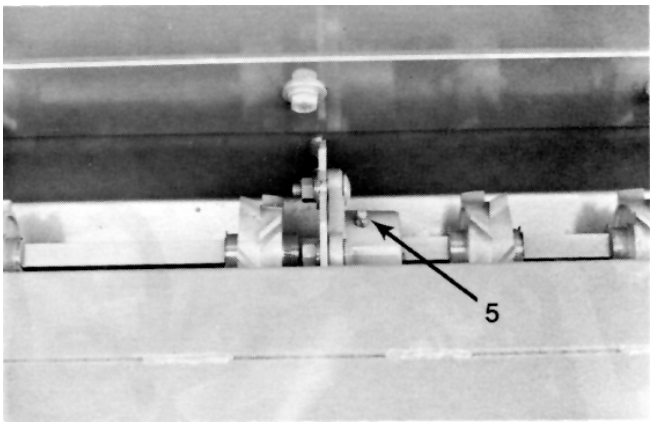


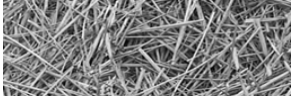


universal joints and square drive line lubrication zerks

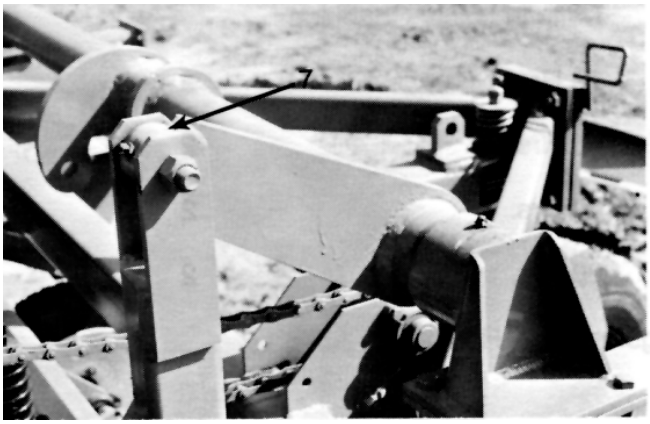


feed wheel shaft lubrication zerk



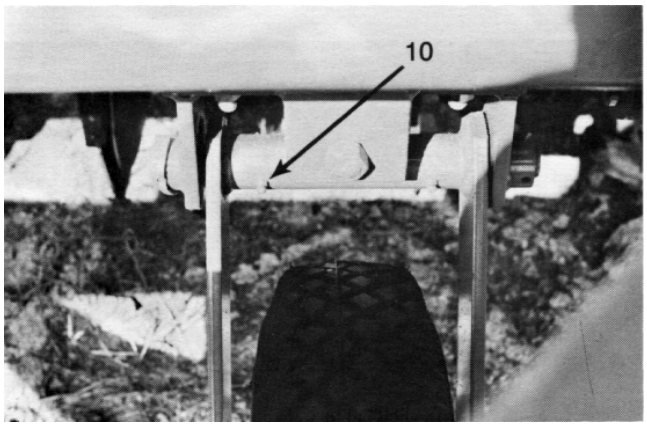


tool bar bushing lubrication zerk

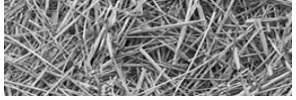


lift arm bushing lubrication zerk

drive wheel frame lubrication zerk



roller chains lubrication



APPENDIX A: WARRANTY

Duratech Industries International, warrants to the original purchaser for one year from purchase date that this product will be free from defects in material and workmanship when used as intended and under normal maintenance and operating conditions. This warranty is limited to the replacement of any defective part or parts returned to our factory in Jamestown, N.D., within thirty (30) days of failure.

This warranty shall become void if in Duratech Industries International's judgment the machine has been subject to misuse, negligence, alterations, damaged by accident or lack of required normal maintenance, or if the product has been used for a purpose for which is was not designed.

All claims for warranty must be made through the dealer which originally sold the product and all warranty adjustments must be made through same.

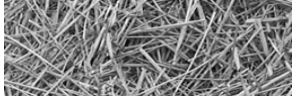
This warranty does not apply to tires or bearings or any other trade accessories not manufactured by Duratech Industries International. Buyer must rely solely on the existing warranty, if any, of these respective manufacturers.

Duratech Industries International shall not be held liable for damages of any kind, direct, contingent, or consequential to property under this warranty. Duratech Industries International cannot be held liable for any damages resulting from causes beyond its control. Duratech Industries International shall not be held liable under this warranty for rental costs or any expense or loss for labor or supplies.

Duratech Industries International reserves the right to make changes in materials and/or designs of this product at any time without notice.

This warranty is void if Duratech Industries International does not receive a valid warranty registration card at its office in Jamestown, N.D., within 10 days from date of original purchase.

All other warranties made with respect to this product, either expressed or implied, are hereby disclaimed by Duratech Industries International.

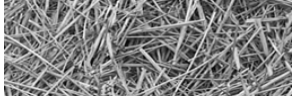


APPENDIX B: SPECIFICATIONS

	77 drill	**107 drill**
Overall Width:	91"	123"
Seeding Width:	84"	126"
End Transport Width:		155"
Height:	73"	73"
Weight:	3360 lbs	3850 lbs
Tire Size- Front:	9.5x14 Implement	9.5x14 Implement
Tire Pressure	44 PSI	44 PSI
Tire Size- Rear:	7.6x14 implement	7.6x14 implement
Tire Pressure	32 PSI	32 PSI
Tire Size- Drive:	4.8x12 4-Ply	4.8x12 4-Ply
Tire Pressure	34 PSI	34 PSI
Hopper Capacity:		
Grain- Front:	12 Bu.	14 Bu.
Granulated Fertilizer:	11.5 Bu.	14 Bu.
Grain- Front & Rear:	23 Bu.	28 Bu.
Feed System:	infinitely adjustable meter	infinitely adjustable meter
Hoses:	rubber convoluted	rubber convoluted
Row Spacing:	7"	7"
Openers - Double Disc:	14"	14"
Press Wheels - Standard:	2" x 15-1/2"	2" x 15-1/2"
Press Wheels - Optional:	2" x 13"	2" x 13"

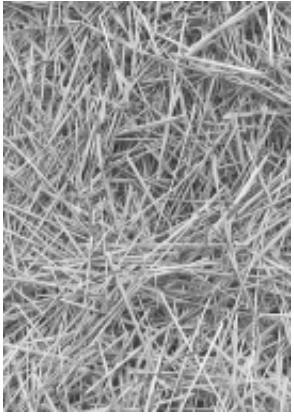
Options:

Swivel Hitch	1-2-3-4 Drill Hitch and Components
Acre Counter	Swivel Hitch
Legume Box	Acre Counter
Native Grass Kit	Hitch Winch
Light Kit	Ballast Tanks
Ballast Tanks	End Hitch
Gauge Wheels	Stabilizer - Front and Rear
	Legume Box
	Native Grass Kit
	Gauge Wheels
	False Bottom
	Light Kit



HAYBUSTER®

A Tradition of Innovation Since 1966

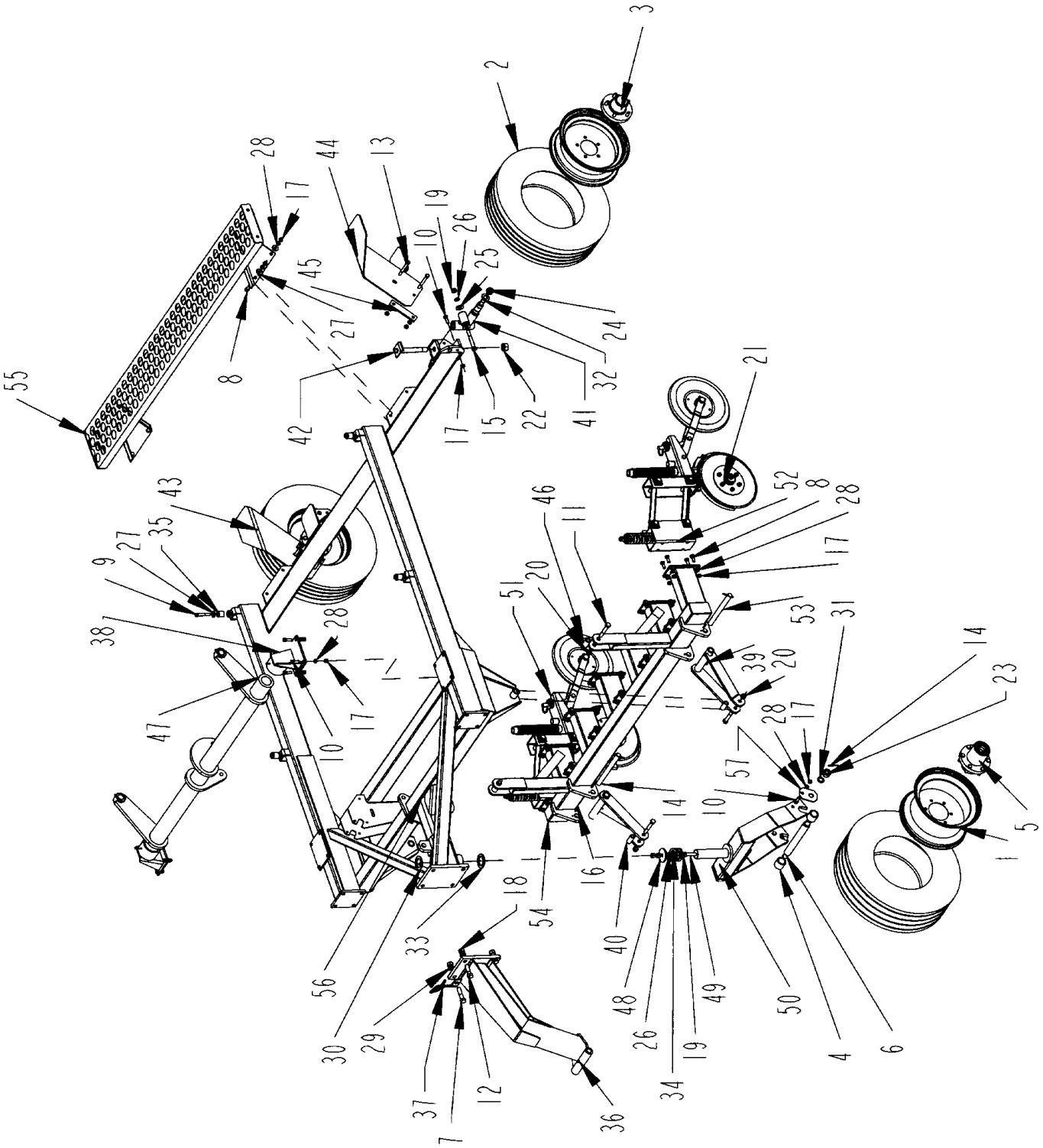


77/107 DRILL

107 DRILL - S.N. CJ 4427 & UP

77 DRILL - S.N. CJ 50177 & UP

Part 2:
Parts Reference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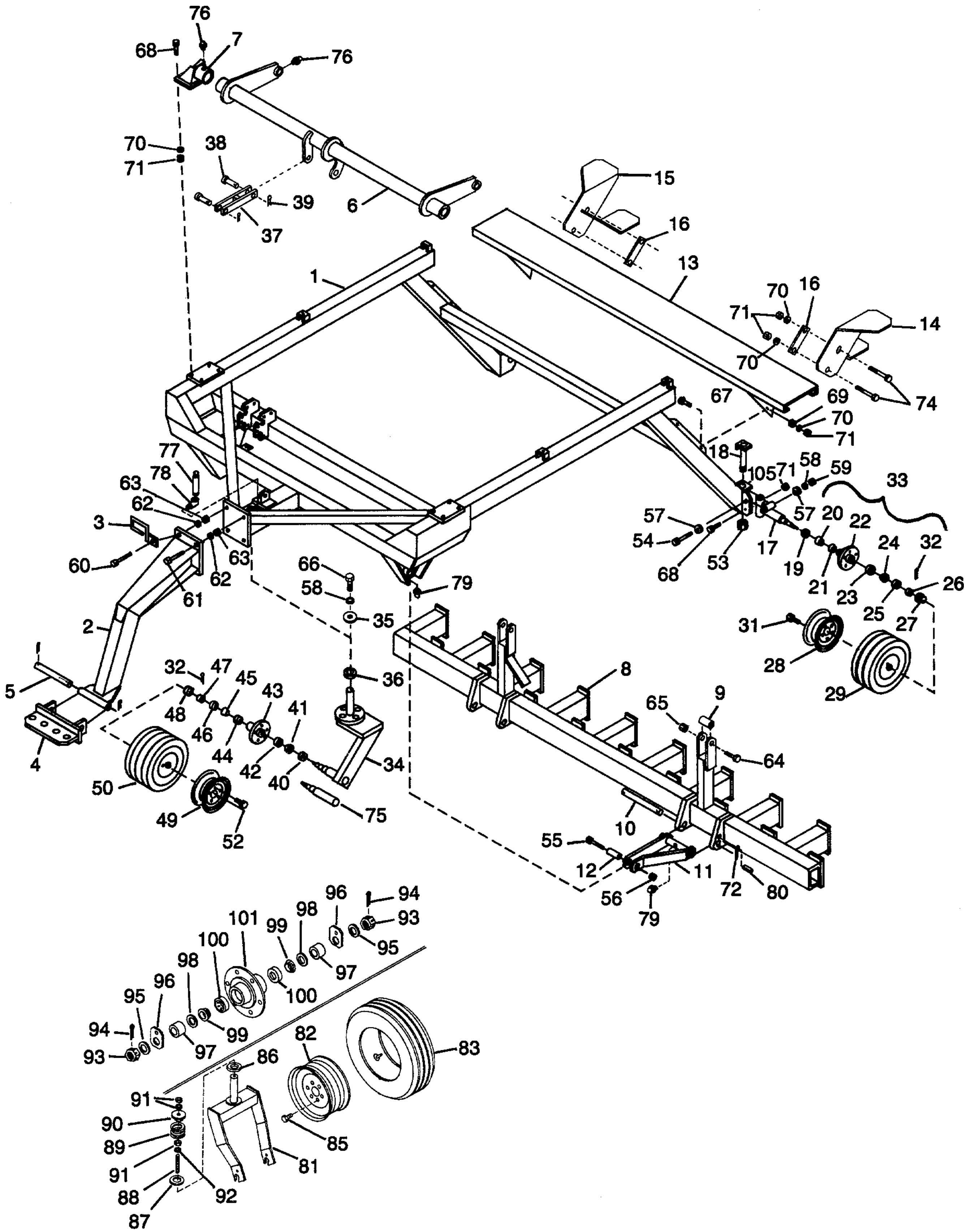
ITEM	PART NO.	QTY.	DESCRIPTION
1	2600825	1	WHL\IMP\9.5X14\TIRE&RIM
	2600013		TIRE\9.5LX14\8PLY
	2600601		WHL\6-BOLT\14X8
2	2600834	2	WHL\IMP\7.60X15\TIRE&RIM
	2600008		TIRE\7:60X15\8PLY;IMP
	2600606		WHL\5-BOLT\15X5
3	2900011	2	HUB\WITH CONES\W/NUTS
4	2900084	2	SPACER\HUB\WHEEL
5	2900089	1	HUB\H-628(FORK)\COMPLETE
6	3000018	1	SPNDL\FORK
7	4800017	1	BOLT\HEX\3/4X3
8	4800018	52	BOLT\HEX\1/2X1-1/4
9	4800068	4	BOLT\HEX\1/2X3
10	4800082	12	BOLT\HEX\1/2X1-1/2
11	4800100	4	BOLT\HEX\5/8X4
12	4800115	3	BOLT\HEX\3/4X2-1/2
13	4800141	4	BOLT\HEX\1/2X4-1/2
14	4800157	6	PIN\COT\3/16X2
15	4800158	2	BOLT\HEX\5/8X4-1/2
16	4800279	4	PIN\RLLD\1/4X1-1/4
17	4900001	68	NUT\HEX\1/2\NC
18	4900004	4	NUT\HEX\3/4\NC
19	4900005	5	NUT\HEX\5/8\NC
20	4900012	4	NUT\TPLCK\5/8\NC
21	4900014	4	NUT\TPLCK\1/2\NC
22	4900015	2	NUT\NYLCK\1\NC
23	4900020	2	NUT\SLOT\1\NC
24	4900054	2	NUT\CASTLE\1/2\NF
25	5000002	4	WASH\FLAT\5/8
26	5000003	3	WASH\LOCK\5/8
27	5000004	16	WASH\FLAT\1/2
28	5000006	66	WASH\LOCK\1/2
29	5000012	4	WASH\LOCK\3/4
30	5000032	1	WASH\MACH\2IDX10GA
31	5000040	2	WASH\BUSH;MACH\1
32	5000055	2	WASH\SPINDLE\7/8
33	5000075	1	WASH\MACH\3X2-1/16X1/4
34	6100044	1	SPRNG\2-1/16X3/8WIRE2"LG
35	7500134	4	GROM 1.25ODX 17/32IDX1.25
36	8400032	1	GOOSENECK
37	8400033	1	HOSE\MINDER
38	8400036	2	TUBE\TORQUE\PIVOT
39	8400038	2	ARM\LIFT
40	8400039	2	BUSH\ARM\LIFT\1X5/8X2-1/8
41	8400041	2	SPNDL\REAR\WHL
42	8400042	2	BOLT\PIVOT\REAR\WHL
43	8400130	1	STEP\REAR\RH
44	8400131	1	STEP\REAR\LH
45	8400132	2	STRAP\REAR\STEP;MOUNT
46	8400150	2	BUSH\TOOL_BAR\1-1/4X3/4X2
47	8400272	1	TUBE\TORQUE
48	8400281	1	CAP\RETARDED\WHL\SWIVEL
49	8400282	1	ROD\THRDD\5/8X4
50	8400283	1	FORK\WHL\SWVL
51	8400351	1	RUN\DRILL\LH\ASSY
52	8400352	1	RUN\DRILL\LH\ASSY
53	8400419	2	PIN\LIFT_ARM\1X11-1/4
54	8400701	1	BAR\TOOL\7"SPCNG
55	8400702	1	WALKWAY\100_SERIES
56	8400742	1	FRM\MAIN\77
57	8800021	2	RETAINER\SPNDL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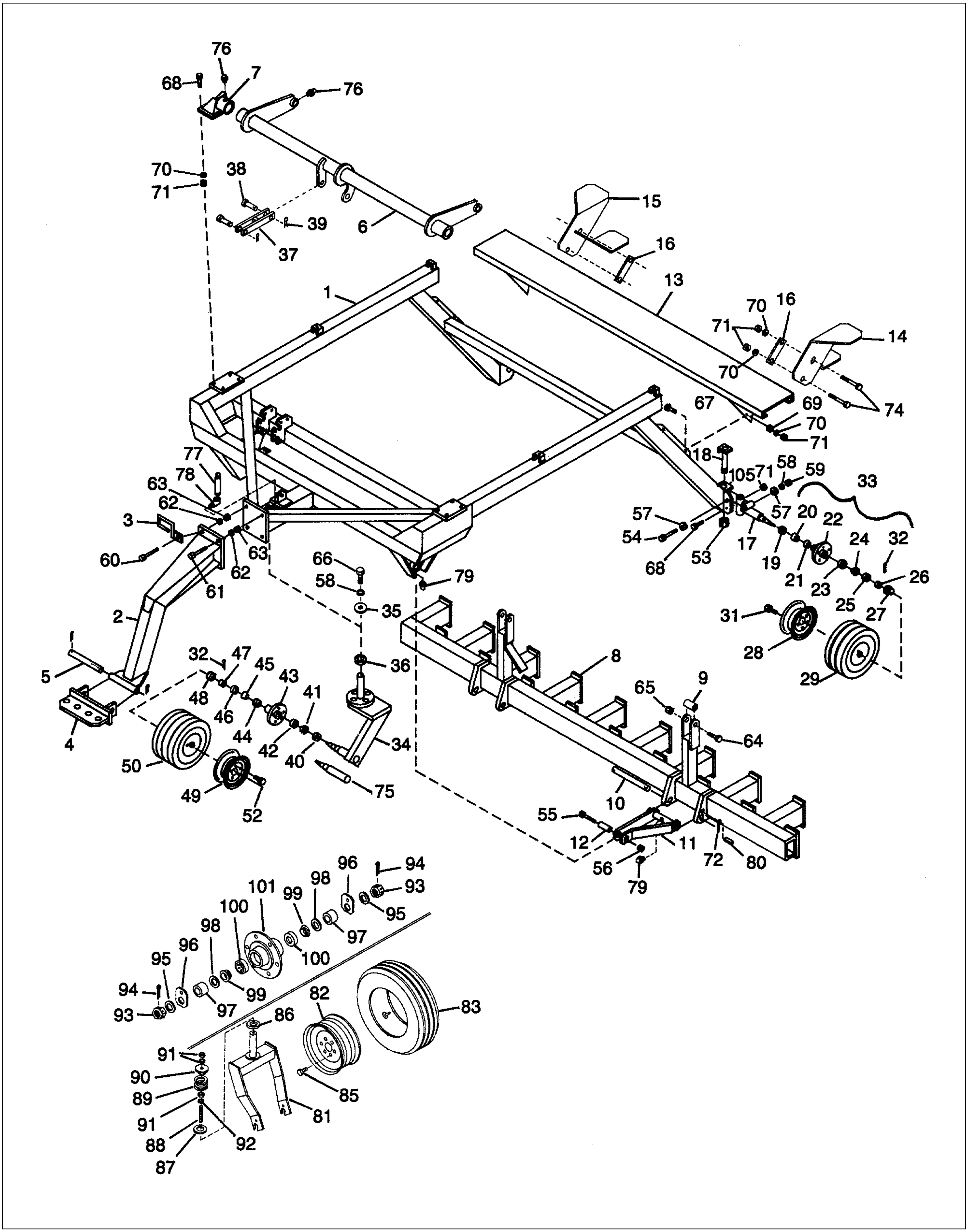
ITEM	PART NO.	QTY.	DESCRIPTION
1	8400031	1	Main Frame
2	8400032	1	Goose Neck
3	8400033	1	Hose Minder
4	8400034	1	Hitch Block
5	8400417	1	Hitch Block Pin 1" x 10"
6	8400272	1	Torque Tube
7	8400036	1	Torque Tube Pivot
8	8400273	1	Tool Bar 7" Spacing
9	8400150	2	Tool Bar Bushing 1-1/4" O.D. x 3/4" I.D. x 2" Long
10	8400419	2	Lift Arm Pin 1" x 11-1/4"
11	8400038	2	Lift Arm
12	8400039	2	Lift Arm Bushing 1" O.D. x 5/8" I.D. x 2-1/8" Long
13	8400040	1	Walk Way
14	8400131	1	Rear Step L.H.
15	8400130	1	Rear Step R.H.
16	8400132	2	Rear Step Strap
17	8400041	2	Rear Wheel Spindle
18	8400042	2	Rear Wheel Pivot Bolt
19	2900014	2	Grease Seal
20	2900015	2	Cone - Inner 1-3/8 Bore
21	2900016	2	Cup - Inner
22	na	2	Hub - 5 Bolt order 2900011
23	2900004	2	Cup - Outer
24	2900018	2	Cone - Outer
25	5000055	2	Washer\Spindle\7/8
26	4900054	2	Nut 7/8" 14" NF
27	2900013	2	Dust Cap
28	2600606	2	Wheel 15 x 5 - 5 Bolt
29	2600008	2	Tire 7.60 x 15-4 Ply Imp
31	2900012	10	Wheel Bolt
32	4800044	3	Cotter Pin 5/32 x 1-1/2
33	2900011	1	Hub (Complete w/Dust Cap) includes 19, 20, 21, 22, 23, 24, 27, & 31
34	8400043	1	Swivel Wheel Frame
35	8400044	1	Swivel Wheel Retainer Washer
36	2000032	1	Thrust Bearing T-199
37	8400103	1	Hold Up Bar (Transport)
38	4800527	2	3/4" x 2" Clevis Pin
39	4800107	1	1/8" Hair Pin
40	2900008	1	Grease Seal
41	2900007	1	Cone - Inner
42	2900006	1	Cup - Inner
43	na	1	Hub - 6 Bolt
43A	2900069	1	Hub Assembly - Complete includes 40, 41, 42, 43, 44, 45, 48, & 52
44	2900004	1	Cup - Outer
45	2900018	1	Cone - Outer
46	5000056	1	Washer
47	4900055	1	Nut
48	2900048	1	Dust Cap
49	2600601	1	Wheel 14" 6" Bolt
50	2600013	1	Tire 9.5L x 14"
52	2900010	6	Wheel Bolts
53	4900015	2	1" NC Lock Nut
54	4800158	2	5/8" x 4-1/2" Hex Bolt
55	4800100	4	5/8" x 4" Hex Bolt
56	4900012	4	5/8" Lock Nut
57	5000002	4	5/8" Flat Washer
58	5000003	3	5/8" Lock Washer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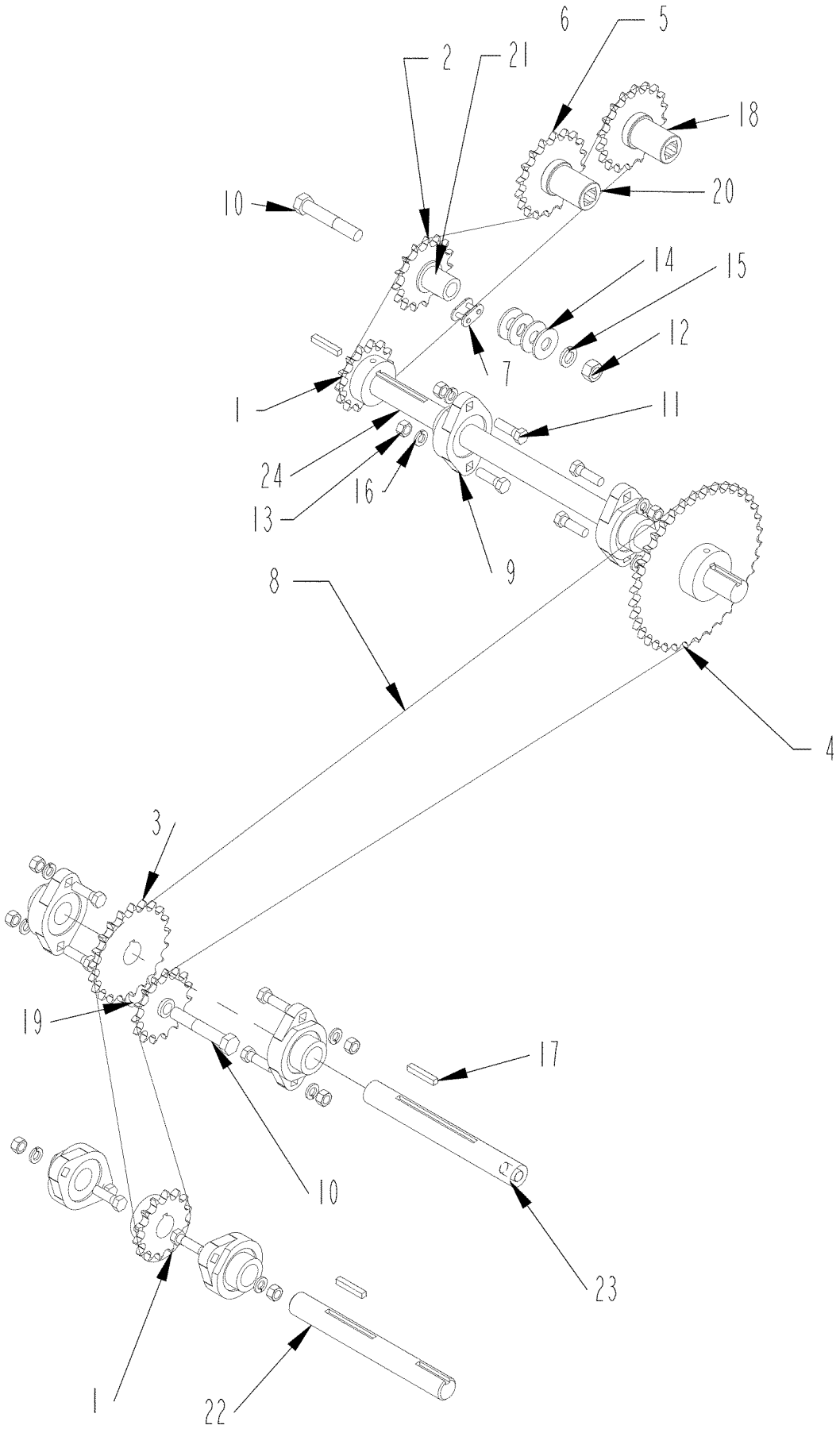
ITEM	PART NO.	QTY.	DESCRIPTION
59	4900005	2	5/8" Hex Nut
60	4800017	1	3/4" x 3" Hex Bolt
61	4800115	3	3/4" x 2-1/2" Hex Bolt
62	5000012	4	3/4" Lock Washer
63	4900004	4	3/4" Hex Nut
64	4800063	2	3/4" x 4" Bolt
65	4900139	2	3/4" Lock Nut Grade 8
66	4800106	1	5/8" x 1-1/2" Hex Bolt
67	4800018	4	1/2" x 1-1/4" Hex Bolt
68	4800082	12	1/2" x 1-1/2" Hex Bolt
69	5000004	4	1/2" Flat Washer
70	5000006	18	1/2" Lock Washer
71	4900001	20	1/2" Hex Nut
72	4800157	6	3/16" x 2" Cotter Key
73	4800044	1	5/32" x 1-1/2" Cotter Key
74	4800141	4	1/2" x 4-1/2" Hex Bolt
75	3000002	1	Spindle
76	3800041	4	1/8" Pipe Straight Zerk
77	3800126	1	1/8" x 2-5/8" Straight Zerk
78	3800111	1	1/8" 90° Straight Elbow
79	3800082	4	1/4" Tapered Straight Zerk (Serial No. 2672 and Up)
80	4800279	2	1/4" x 1-1/4" Rolled Pin (Serial No. 2672 and Up)
81	8400283	1	Swivel Wheel Fork
82	2600601	1	Wheel 14" x 6" 6 Bolt
83	2600013	1	Tire 9.5L x 14
82 & 83	2600825		WHL\IMP\9.5X14\TIRE & RIM
85	2900083	6	Wheel Bolt Nut 9/16"
86	5000075	1	3" O.D. x 2-1/16" I.D. x 1/4" Washer
87	5000032	1	2" I.D. x 10 Ga. Washer
88	8400282	1	5/8" x 4" Threaded Rod
89	6100044	1	Spring
90	8400281	1	Swivel Wheel Retarder Cap
91	4900005	3	5/8" Nut
92	5000003	1	5/8" Lock Washer
93	4900115	2	1" Castle Nut
94	4800157	2	3/16" x 2" Cotter Key
95	5000056	2	1" Spindle Washer
96	8800021	2	Spindle Keeper
97	2900084	2	Spacer
98	2900085	2	Seal
99	2900086	2	Cone 2788
100	2900087	2	Cup 2720
101	na	1	Hub order 2900089
102	2900089	1	Hub Assembly includes 98, 99, & 100
103	3000018	1	Spindle (Not Shown)
104	2900090	6	9/16 x 2-1/4 Stud Bolt
105	8400349	2	Rear Wheel Pivot Mount
106	8400611	1	
107	8400612	1	
108	8400450	1	King Pin 2" O.D. x 11-1/2" Hardened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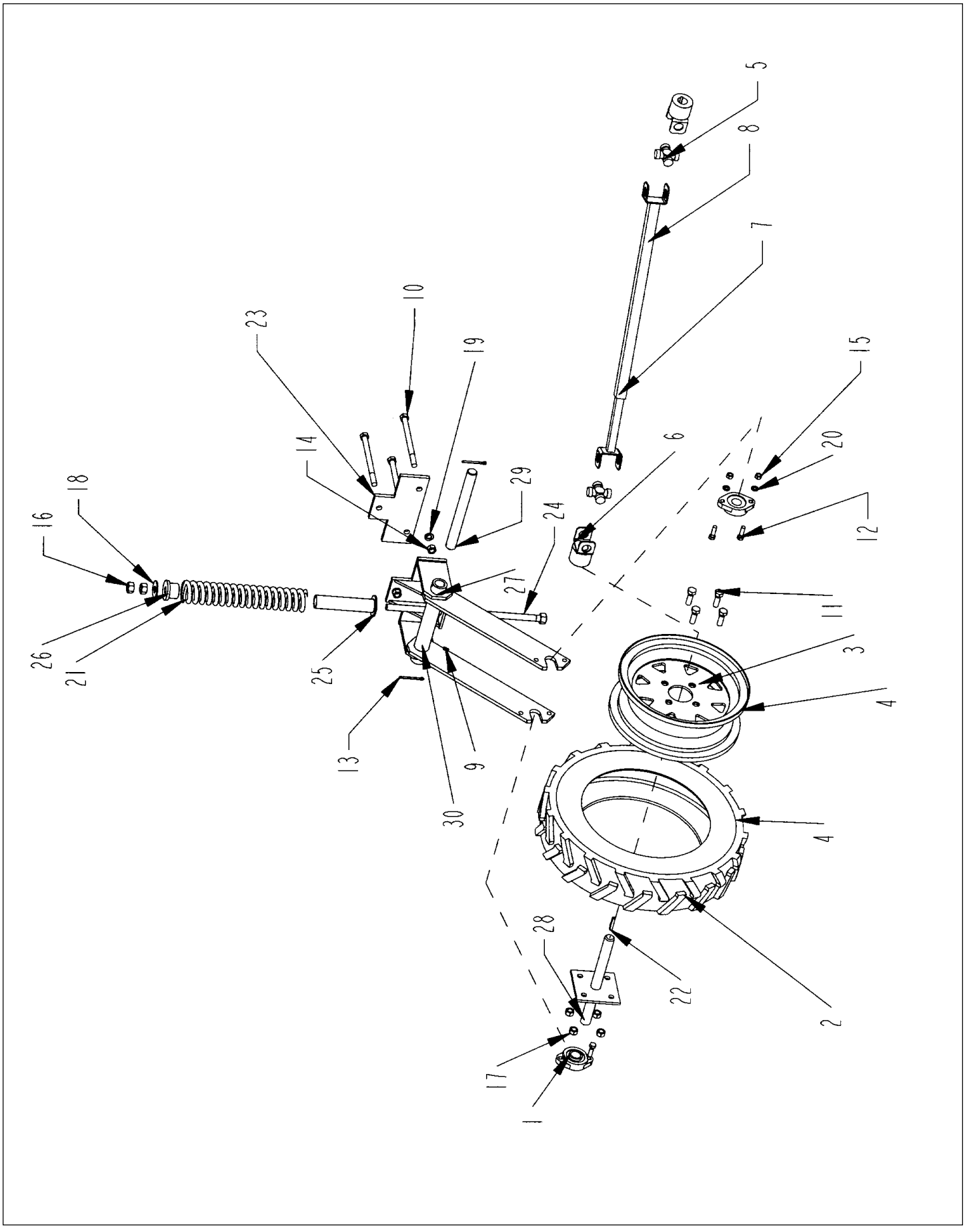
1	1000029	2	SPKT\50\B\14\1\1/4KW
2	1000039	2	SPKT\50\15\1/2\IDLER
3	1000057	1	SPKT\50\B\21\1\1/4KW
4	1000075	1	SPKT\50\B\36\1\1/4KW
5	1000109	2	SPKT\50\18\PL
6	1100006	1	CHAIN\50\73
7	1100059	1	CHAIN\50\CL
8	1100281	1	CHAIN\2050NP\87
9	2000310	6	BRG\FLG\CAST\1\2BOLT
10	4800068	2	BOLT\HEX\1/2X3
11	4800098	12	BOLT\HEX\3/8X1-1/4\NC
12	4900001	2	NUT\HEX\1/2\NC
13	4900002	12	NUT\HEX\3/8\NC
14	5000004	10	WASH\FLAT\1/2
15	5000006	2	WASH\LOCK\1/2
16	5000019	12	WASH\LOCK\3/8
17	6200005	4	KEY\SQ\1/4X1-1/2
18	7400065	2	SLV\SQ_HL\5/8X1-1/4OD
19	8400058	1	SPCR\DRV\1ODX.640IDX1L\>
20	8400071	2	SPKT\DRIVE\W/SQ_HL_SLV
21	8400073	1	SPCR\DRV\1ODX.640IDX1.25L
22	8400415	1	SHFT\1ST\1X8-3/4\1000
23	8400446	1	SHFT\1X8-1/2\ACRECTR
24	8400718	1	SHFT\1X21.5
24A	8400738		SHFT\DRV\77\NTV_GR\1X23.5**

NOTE (**): REQUIRED WHEN THE NATIVE GRASS KIT AND A LEGUME BOX ARE MOUNTED ON THE SAME 77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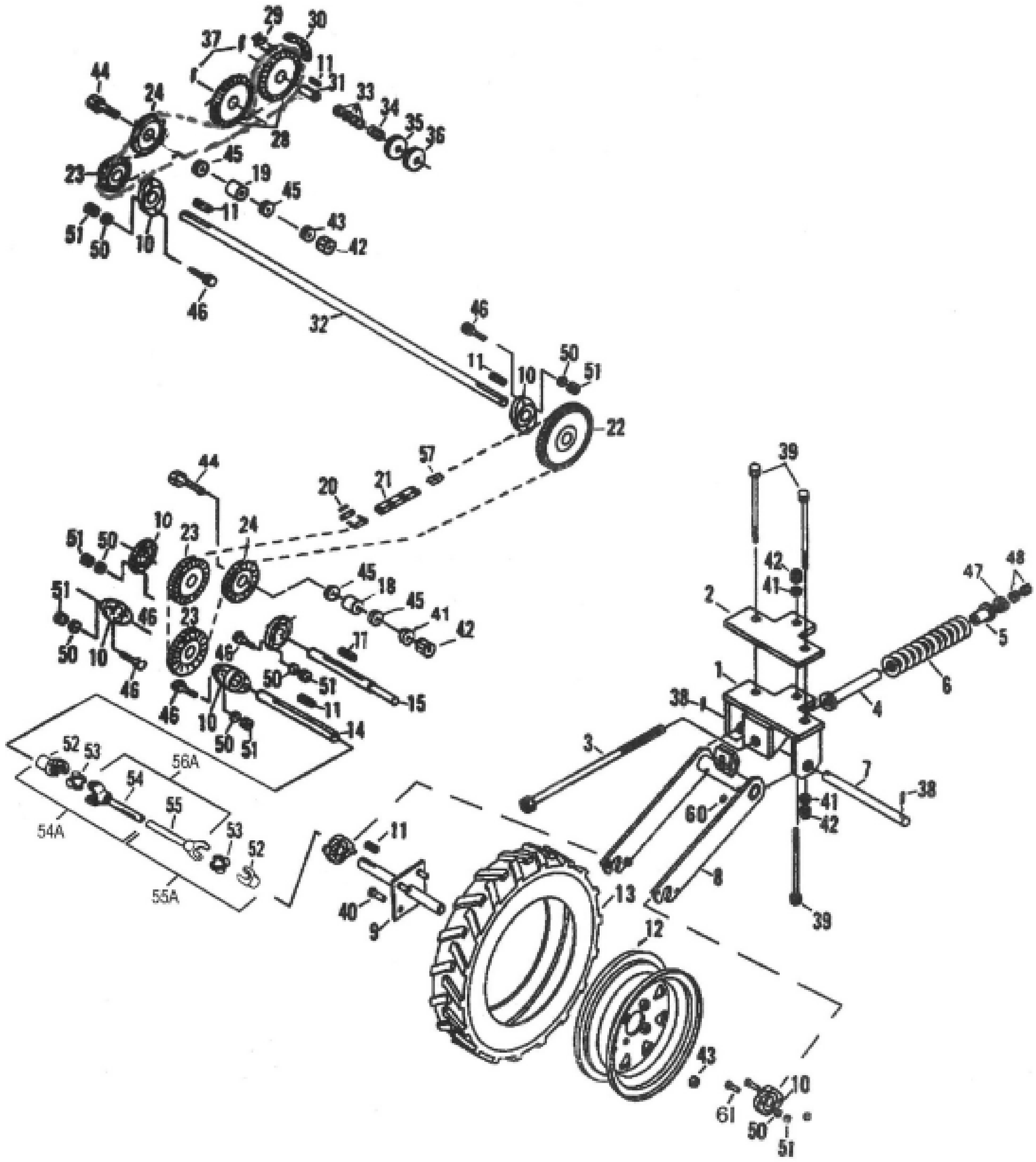
77 DRIVE WHEEL ASSEMBLY

ITEM	PART NO.	QTY.	DESCRIPTION
1	2000310	2	BRG\FLG\CAST\1\2BOLT
2	2600042	1	TIRE\4.8X12\LUG\4PLY
3	2600618	1	WHL\12X4\4HL\RIM
4	2600822	1	WHL\ASSY\4.8X12\4-BOLT\LUG TREAD includes items 2 & 3
	3600241		SHFT\DRV\CMPLT\TR6NA (includes items 5, 6, 7, & 8)
5	3600008	2	CROSS BEARING KIT
6	3600242	2	1" ROUND BORE YOKE 36-241
7	3600253	1	MALE HALF FOR 3600241
8	3600254	1	FEMALE HALF FOR 3600241
9	3800082	2	FTG\LUB\1/4NFXZERK\ADAPT
10	4800080	3	BOLT\HEX\1/2X7
11	4800082	4	BOLT\HEX\1/2X1-1/2
12	4800098	4	BOLT\HEX\3/8X1-1/4\NC
13	4800157	2	PIN\COT\3/16X2
14	4900001	3	NUT\HEX\1/2\NC
15	4900002	4	NUT\HEX\3/8\NC
16	4900005	3	NUT\HEX\5/8\NC
17	4900014	4	NUT\TPLCK\1/2\NC
18	5000002	1	WASH\FLAT\5/8
19	5000006	3	WASH\LOCK\1/2
20	5000019	4	WASH\LOCK\3/8
21	6100032	1	SPRING\12-1/2X2-1/4 O.D. (.406 WIRE)
22	6200005	1	KEY\SQ\1/4X1-1/2
23	8400023	1	PL\MNT\WHL\DR
24	8400024	1	ROD\SPRG\WHL\DR
25	8400025	1	GUIDE\SPRING\LONG
26	8400026	1	GUIDE\SPRING\SHORT
27	8400310	1	FRM\WHL\DR\WELD
28	8400414	1	AXLE\WHL\DRV
29	8400442	1	PIN\WHL\DR\1"X10 1/2"
30	8400626	1	BRKT\FORK\WHL\DRV\16-1/2X7-1/2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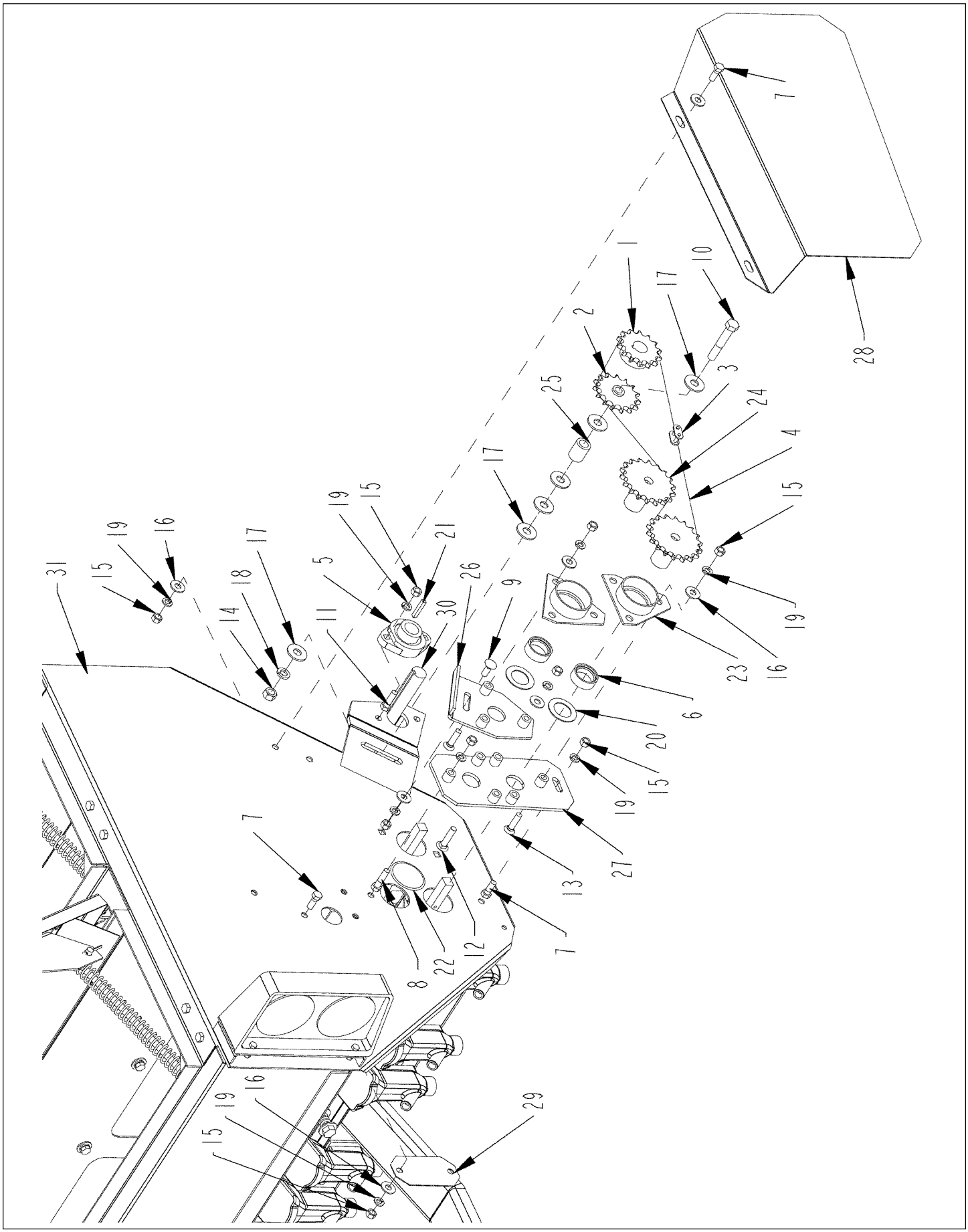
ITEM	PART NO.	QTY.	DESCRIPTION
1	8400310	1	Drive Wheel Frame
2	8400023	1	Drive Wheel Mount Plate
3	8400024	1	Drive Wheel Spring Rod
4	8400025	1	Spring Guide (Long)
5	8400026	1	Spring Guide (Short)
6	6100032	1	Spring
7	8400311	1	Pin, 1"x 10-1/2"
8	8400626		Drive Wheel Fork
9	8400414	1	Drive Wheel Shaft
10	2000310	8	1" Cast Flangette
11	6200014	7	1/4" Key, 1-1/4"
12&13	2600821	1	Wheel Asy., 4.80 x 12, 4 Bolt, Lug Tire
13	2600042	1	Tire, 4.80 x 12, Lug, 4 Ply
14	8400415	1	1st Shaft, 1 " x 8-3/4"
15	8400416	1	2nd Shaft, 1" x 10"
15A	8400446	1	SHFT\1X8-1/2\ACRECTR
18	8400058	1	Spacer, 1" x 1" O.D.
19	8400059	1	Spacer, 3/4" x 1" O.D.
20	1100230	1	A2050NP Conn. Link
21	1100238	1	A2050NP Chain. 84 Links w/CL
22	1000075	1	5036 Sprocket 1" Shaft 1/4KW
23	1000029	3	5014 Sprocket 1" Shaft 1/4KW
24	1000039	1	Idler Sprocket - 15 Tooth 50/15/1/2
28	1000100	2	5018 Sprocket
29	1100059	1	#50 Conn. Link
30	1100006	1	#50 Chain, 73 Links w/CL
31	7400250	2	Sq. Hole Sleeve w/K.W. 2-1/8"
32	8400440	1	Shaft 1" x 36"
32A	8400573		SHFT\DR\TANK\1X38*
33	5000027	8	Washers, 1-3/8" O.D. x 7/8" I.D. x 18 Ga.
34	6100016	2	Springs
35	5000013	2	Steel Washer, 5/8" Sq. Hole
36	5000028	2	Nylon Washer, 5/8" Sq. Hole
37	4800123	3	1/8" x 1-1/2" Cotter Key
38	4800157	1	3/16" x 2" Cotter Key
39	4800080	3	1/2" x 7" Hex Bolt
40	4800018	4	1/2" x 1-1/4" Hex Bolt
41	5000006	3	1/2" Lock Washer
42	4900001	3	1/2" Hex Nut
43	4900014	4	1/2" Lock Nut
44	4800068	2	1/2" x 3" Hex Bolt
45	5000004	4	1/2" Flat Washer
46	4800098	12	2 3/8" x 1-1/4" Hex Bolt
47	5000002	1	5/8" Flat Washer
48	4900005	2	5/8" Hex Nut
50	5000019	1	8 3/8" Lock Washer
51	4900002	2	0 3/8" Hex Nut
52	3600103	2	GRW 1" Yoke
52A	3600242	2	1" ROUND BORE YOKE 36-241
53	3600008	2	GRW Cross & Brg.
54	3600105	1	LGW Tube w/Yoke
54A	3600254	4	FEMALE HALF FOR 3600241
55	3600106	1	LGW Shaft w/Yoke
55A	3600253	3	MALE HALF FOR 3600241
56	3600102	1	LGW Power Shaft Comp
56A	3600241	1	SHFT\DRV\CMPLT\TR6NA
57	1100228	2	Chain/50NP/OL
60	3800082	2	1/4" Tapered Straight Zerk
61	4800034	4	3/8X1-1/2 Hex Bolt

NOTE (*): REQUIRED WHEN THE NATIVE GRASS KIT AND A LEGUME BOX ARE MOUNTED ON THE 107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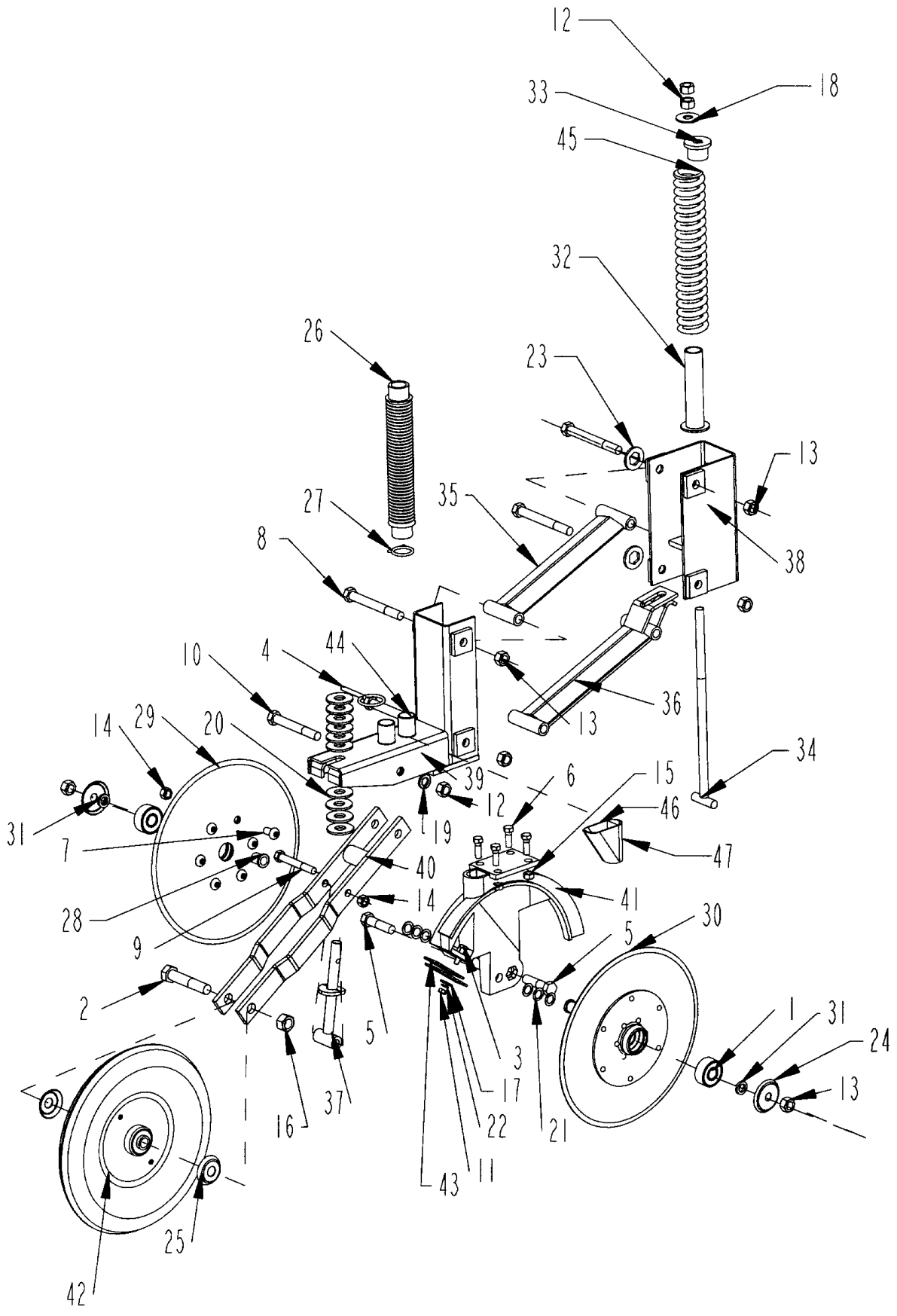
ITEM	PART NO.	QTY.	DESCRIPTION
1	1000029	1	SPKT\50\B\14\1\1/4KW
2	1000039	1	SPKT\50\15\1/2\IDLER
3	1100234	1	CHAIN\NP50\73
4	1100227	1	CHAIN\50NP\CL
5	2000310	1	BRG\FLG\CAST\1-1/4\2BOLT
6	2000824	2	CLLR\BRG\1-1/4 - FOR 8400070
7	4800003	3	BOLT\HEX\3/8X8X1
8	4800034	1	BOLT\HEX\3/8X8X1-1/2
9	4800053	1	BOLT\CRG\3/8X1\NC
10	4800068	1	BOLT\HEX\1/2X3
11	4800098	4	BOLT\HEX\3/8X1-1/4\NC
12	4800168	1	BOLT\CRG\3/8X1-3/4\NC
13	4800230	5	SCR\CSK\ALN\3/8X1-1/2\NC
14	4900001	1	NUT\HEX\1/2\NC
15	4900002	15	NUT\HEX\3/8\NC
16	5000001	2	WASH\FLAT\3/8
17	5000004	6	WASH\FLAT\1/2
18	5000006	1	WASH\LOCK\1/2
19	5000019	15	WASH\LOCK\3/8
20	5000084	2	2”PD 1-1/4ID OILITE WASHER
21	6200014	1	KEY\SQ\1/4X1-1/4
22	7500515	2	PLASTIC PLUG 107 DRILL
23	8400070	2	BRG\1-1/4\W/BRKT\3-HL
24	8400071	2	SPKT\DRIVE\50\18\W/SQ_HL_SLV
25	8400073	1	SPCR\DRV\1ODX.640IDX1.25L
26	8400074	1	PL\SEAL\TANK\DRILL
27	8400242	1	PL\SEAL\TANK\107
28	8400243	1	SHLD\DR\AGTTR\SGL
29	8400274	1	PLUG\TANK\STL\107DRILL
30	8400440	1	SHFT\1X36\100 DRILL (107 DRILL)*
30A	8400573	1	SHFT\DR\TANK\1X38 (107 DRILL)*
30B	8400718	1	SHFT\1X21.5 (77 DRILL)**
30C	8400738	1	SHFT\DRV\77\NTV_GR\1X23.5 (77DRILL)**
31	8400244	1	TANK\WLDMNT\S/N2672\107
31A	8400703	1	TANK\WELDMENT\77

NOTE (*): REQUIRED WHEN THE NATIVE GRASS KIT AND A LEGUME BOX ARE MOUNTED ON THE SAME 107

NOTE (**): REQUIRED WHEN THE NATIVE GRASS KIT AND A LEGUME BOX ARE MOUNTED ON THE SAME 77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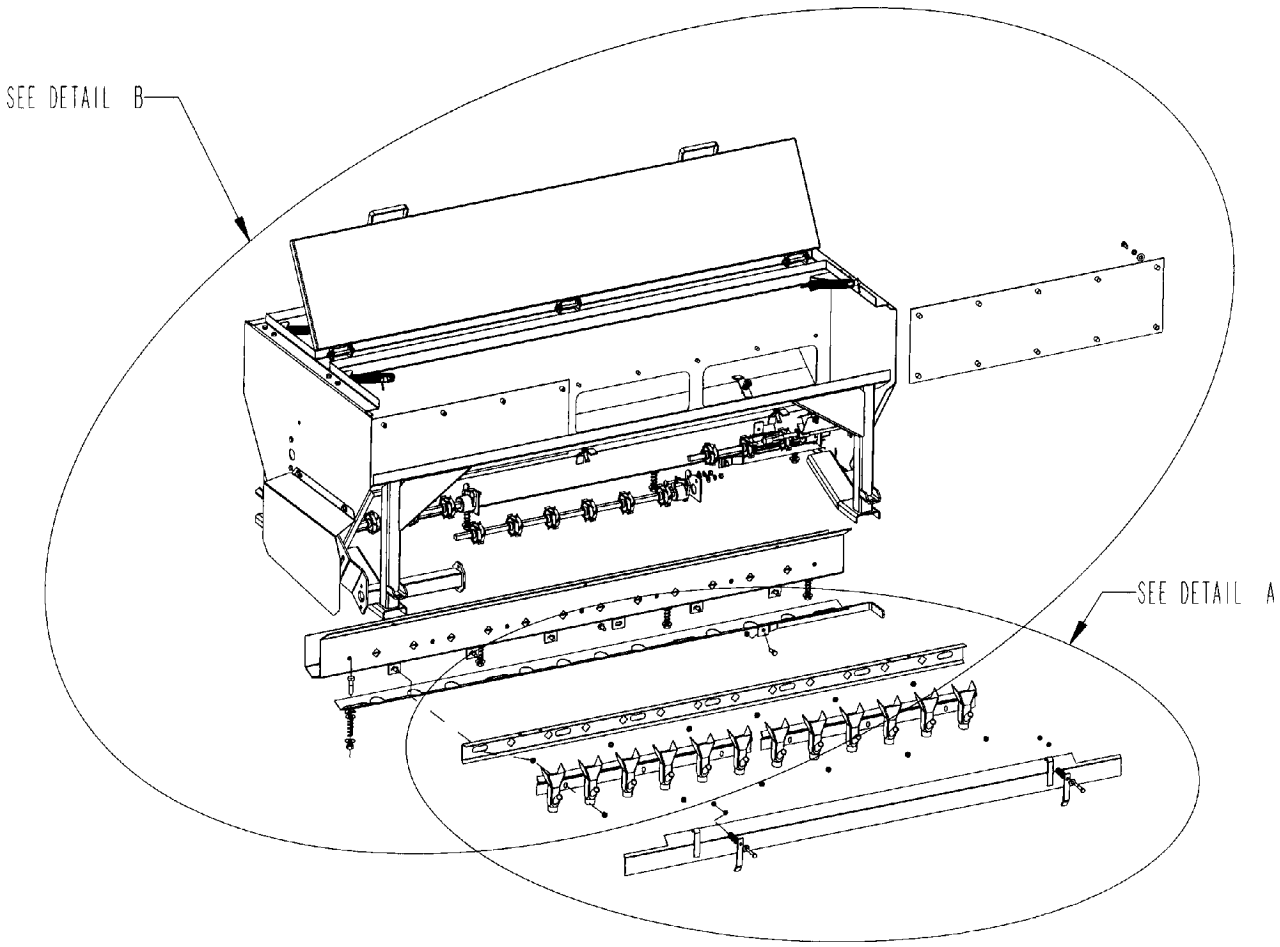
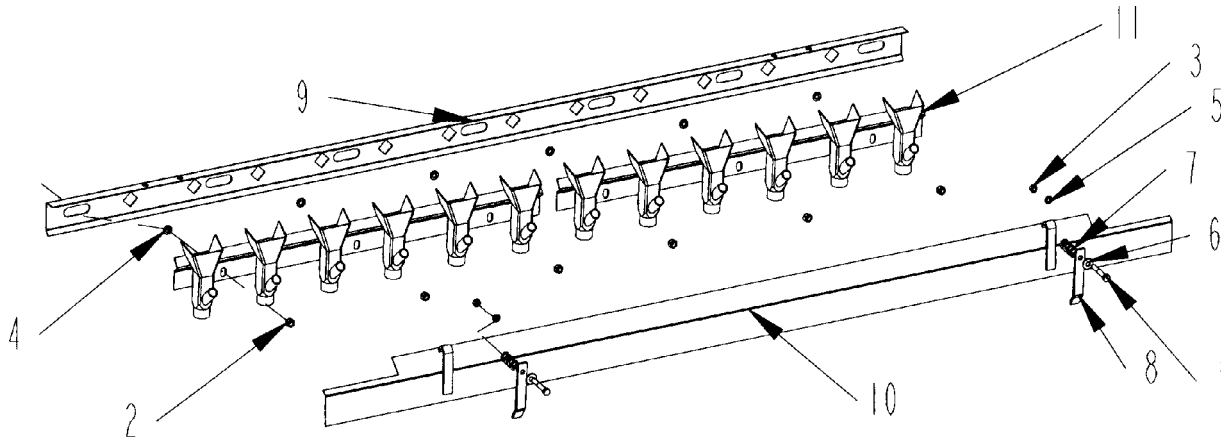
ITEM	PART NO.	QTY.	DESCRIPTION
1	2000031	2	BRG\ROW\DBL
2	4800063	1	BOLT\HEX\3/4X4
3	4800071	1	BOLT\HEX\5/16X1-1/4
4	4800076	1	PIN\KLIK\5/16
5	4800079	2	BOLT\HEX\5/8X2-1/2
6	4800160	4	BOLT\HEX\7/16X1-1/4
7	4800161	6	SCR\BUT\ALN\1/2X1\NC
8	4800218	4	BOLT\HEX\5/8X5-1/2
9	4800231	1	BOLT\HEX\1/2X3-3/4
10	4800652	1	BOLT\HEX\5/8X4-3/4\NC
11	4900003	1	NUT\HEX\5/16\NC
12	4900005	3	NUT\HEX\5/8\NC
13	4900012	6	NUT\TPLCK\5/8\NC
14	4900014	7	NUT\TPLCK\1/2\NC
15	4900035	4	NUT\TPLCK\7/16\NC
16	4900139	1	NUT\TPLCK\3/4\GR8\NC
17	5000023	1	WASH\FLAT\5/16
18	5000002	1	WASH\FLAT\5/8
19	5000003	1	WASH\LOCK\5/8
20	5000005	10	WASH\FLAT\3/4
21	5000009	6	WASH\1" OD\ SHIM
22	5000022	1	WASH\LOCK\5/16
23	5000067	4	WASH\HEX\15/16IDX1.75X7GA
24	7400258	2	CAP\DUST
25	7400264	2	CAP\WHL\W/O_PILOT
26	7500097	1	CONVOLUTED HOSE
27	7500098	1	CLAMP\SDHOSE\1-1/4\A-24
28	7500160	2	#6610 BREAING BUSHING
29	7500187	1	BLADE\ASSY\14"\COULTER
30	7500188	1	BLADE\ASSY\DISC\14"
31	7500307	2	CAP\SPACER\BUSHING
32	8400025	1	GUIDE\SPRING\LONG
33	8400026	1	GUIDE\SPRING\SHORT
34	8400047	1	ROD\SPG\5/8X15
35	8400048	1	LINK\RUN\UPPER
36	8400049	1	LINK\RUN\LWR
37	8400064	1	ROD\DEPTH\WHEEL\PACKER
38	8400340	1	FRM\RUN\FR\107\SN672
39	8400341	1	FRM\RUN\REAR\107\SN2672
40	8400355	1	WHL\PRESS\STL\SUB-ASY
41	8400567	1	BOOT\DRILL\LH\ASSY
41	8400568	1	BOOT\DRILL\RH\ASSY
42	8400617	1	WHL\PRESS\STL\ASSY
43	8400670	2	SCRPR\DISC
44	8400673	2	TUBE\FRM\RUN\REAR
45	6100032	1	SPRING\12-1/2X2-1/4 O.D. (.406 WIRE)
46	8400671	1	GUIDE\TUBE\LH\FRM\RUN\REAR
47	8400672	1	GUIDE\TUBE\RH\FRM\RUN\REAR

77 TANK ASSEMBLY (DETAIL A)



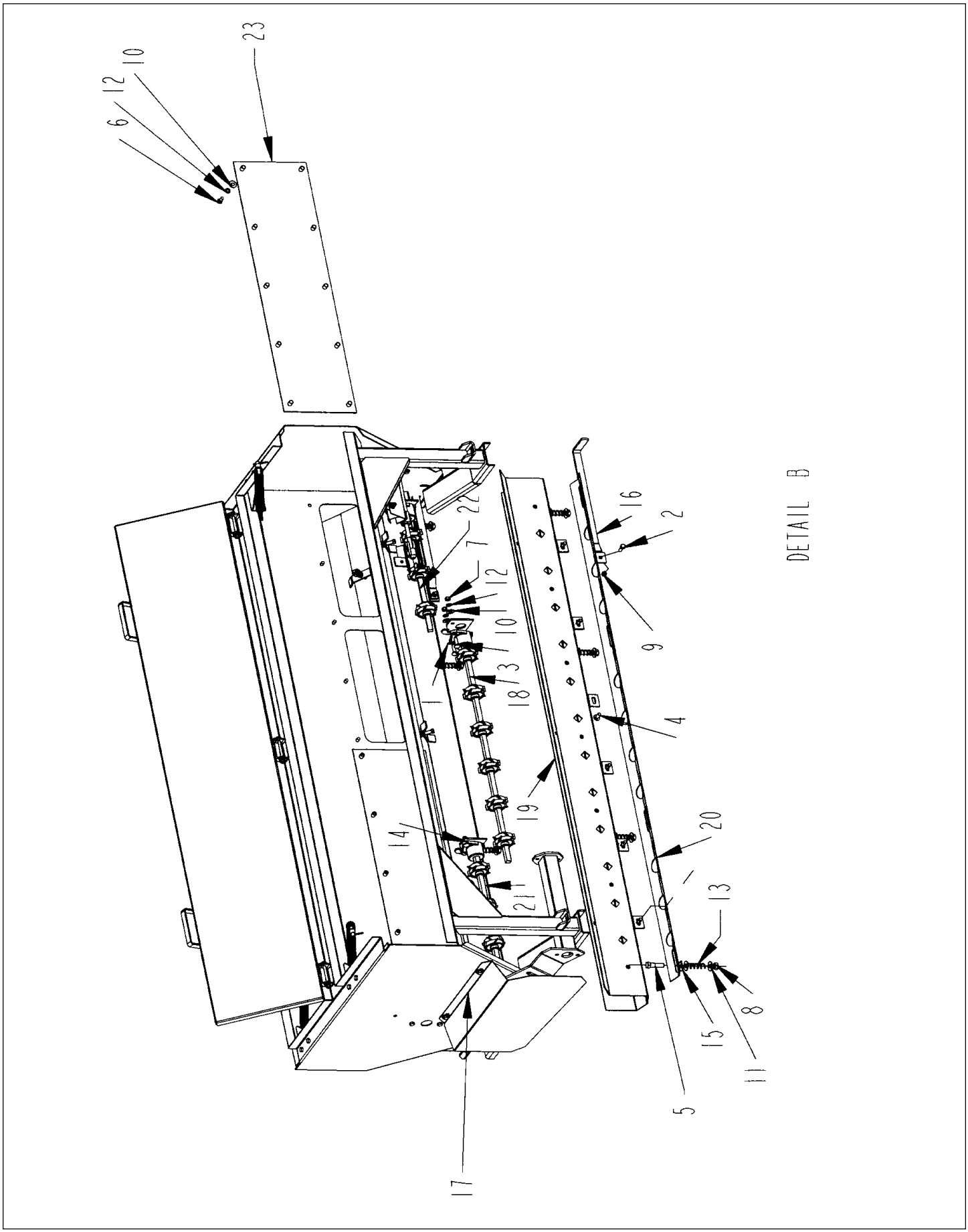


DETAIL A

77 TANK ASSEMBLY (DETAIL A)

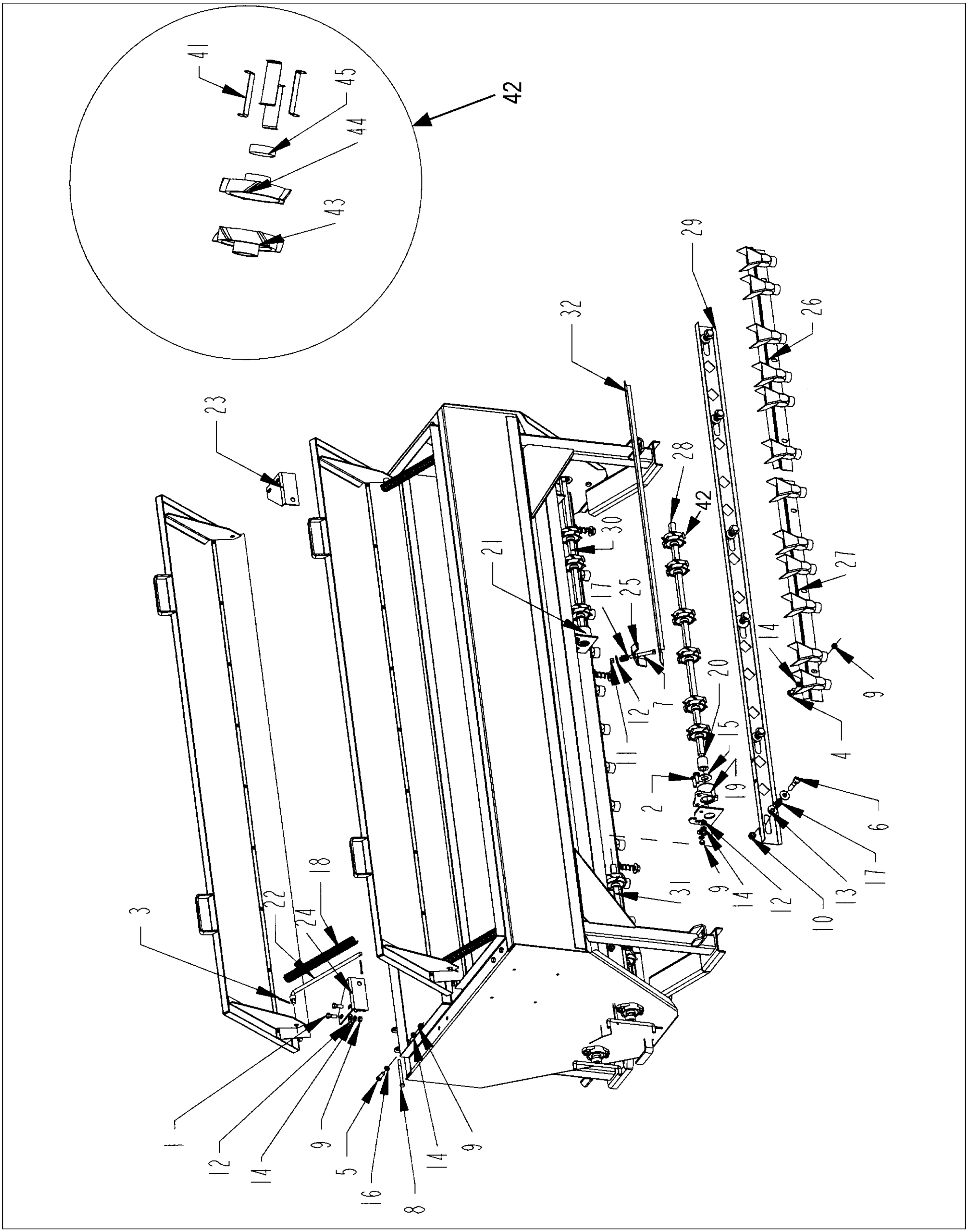
ITEM	PART NO.	QTY.	DESCRIPTION
1	4800118	4	BOLT\HEX\5/16X2
2	4900002	49	NUT\HEX\3/8\NC
3	4900003	21	NUT\HEX\5/16\NC
4	5000019	69	WASH\LOCK\3/8
5	5000022	21	WASH\LOCK\5/16
6	5000023	16	WASH\FLAT\5/16
7	6100002	12	SPRING\COMP\.072W\11/16OD\2-1/8LONG
8	8300355	4	LATCH\GUARD\WIND\8000
9	8400705	1	PL\CNTRL\7" SPACING
10	8400715	2	GUARD\WIND
11	8700015	2	CUP\SEED\CTR\LB

77 TANK ASSEMBLY (DETAIL B)



77 TANK ASSEMBLY (DETAIL B)

ITEM	PART NO.	QTY.	DESCRIPTION
1	3800082	6	FTG\LUB\1/4NFXZERK\ADAPT
2	4800003	15	BOLT\HEX\3/8X1
3	4800012	12	BOLT\CRG\3/8X1-1/4\NC
4	4800053	13	BOLT\CRG\3/8X1\NC
5	4800114	14	BOLT\HEX\1/2X2
6	4800164	20	BOLT\HEX\3/8X3/4
7	4900002	49	NUT\HEX\3/8\NC
8	4900014	13	NUT\TPLCK\1/2\NC
9	4900023	2	NUT\TPLCK\3/8\NC
10	5000001	61	WASH\FLAT\3/8
11	5000016	27	WASH\FLAT\7/16
12	5000019	69	WASH\LOCK\3/8
13	6100002	12	SPRING\COMP\.072W\11/16OD\2-1/8LONG
14	7501058	4	SUP\SHFT\ASSY\SLEEVE
15	8300236	8	WASH\BENT\1/2"
16	8400112	2	HDL\PL_CLEANOUT
17	8400243	1	SHLD\DR\AGTTR\SGL
18	8400658	1	WHL\FEED\33-1/16\FR\CTR
19	8400703	1	TANK\WLDMNT\77
20	8400704	2	PL\CLEANOUT\TANK
21	8400707	1	WHL\FEED\23-15/16\FR\RH
22	8400709	1	WHL\FEED\19"\FR\LH
23	8400717	2	COV\DIVIDER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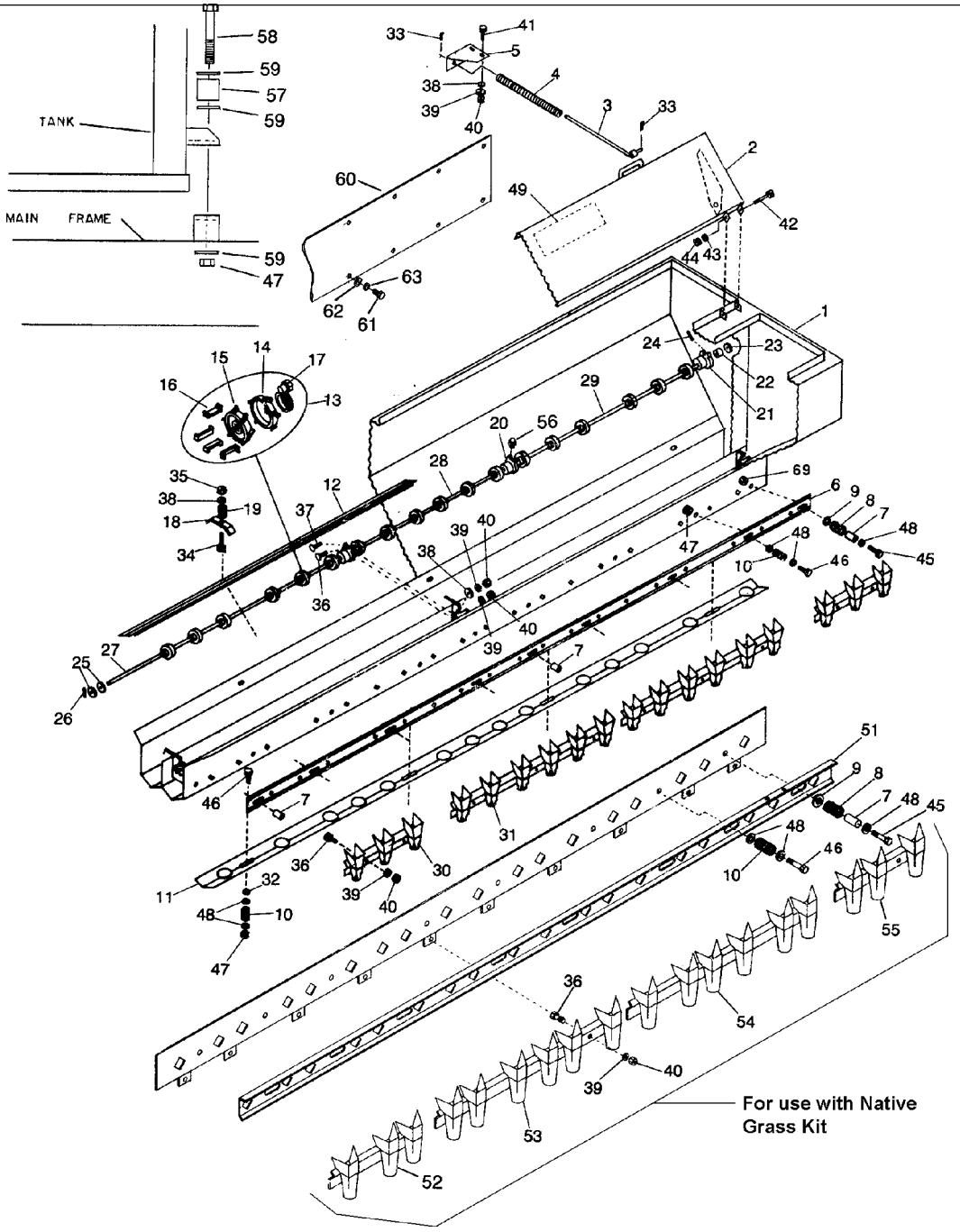
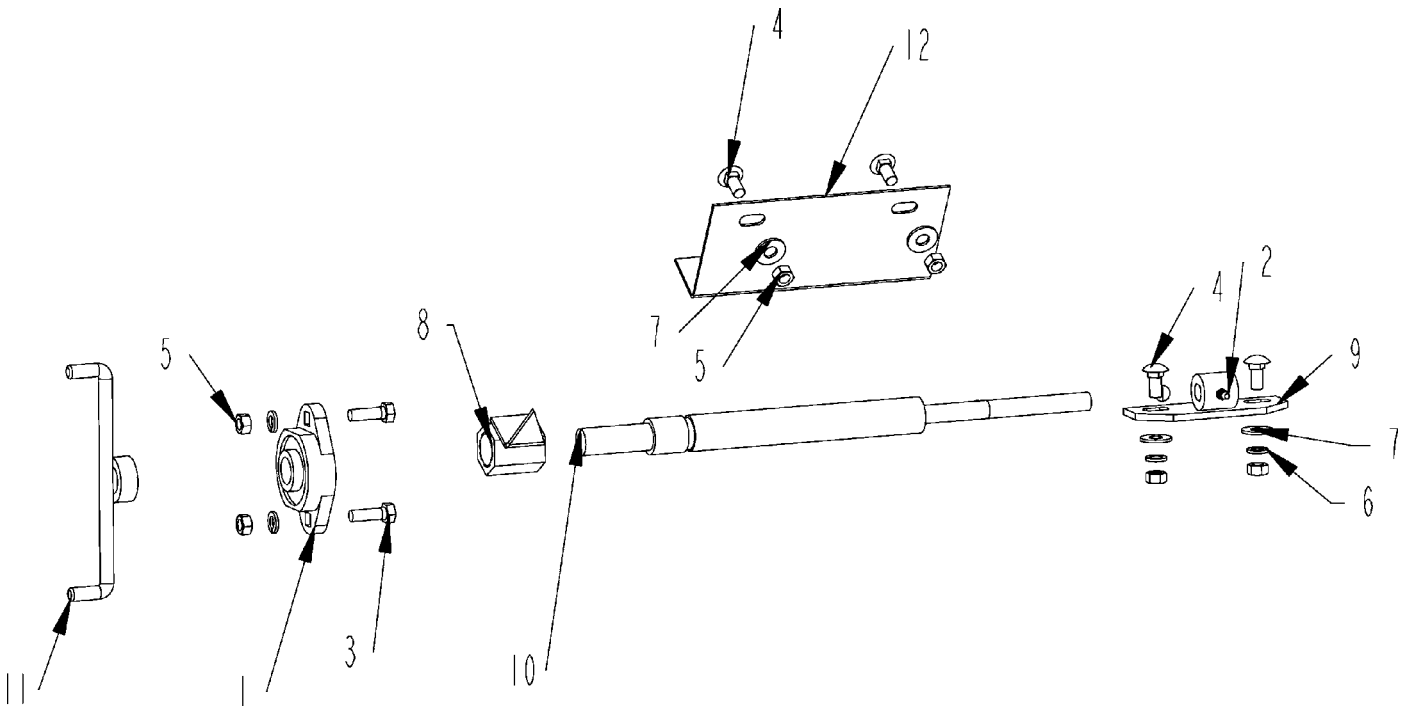
ITEM	PART NO.	QTY.	DESCRIPTION
1	4800003	15	BOLT\HEX\3/8X1
2	4800012	12	BOLT\CRG\3/8X1-1/4\NC
3	4800044	8	PIN\COT\5/16X1-1/2
4	4800053	13	BOLT\CRG\3/8X1\NC
5	4800098	4	BOLT\HEX\3/8X1-1/4\NC
6	4800114	14	BOLT\HEX\1/2X2
7	4800156	6	BOLT\HEX\3/8X3
8	4800170	6	BOLT\HEX\5/16X3-1/2
9	4900002	49	NUT\HEX\3/8\NC
10	4900014	13	NUT\TPLCK\1/2\NC
11	4900030	6	NUT\NYLCK\3/8\NC
12	5000001	61	WASH\FLAT\3/8
13	5000016	27	WASH\FLAT\7/16
14	5000019	69	WASH\LOCK\3/8
15	5000055	4	WASH\SPNDL\7/8
16	5000128	4	WASH\FLAT\3/8\RBBR\EPDM
17	6100002	12	SPRING\COMP\.072W\11/16OD\2-1/8LONG
18	6100017	4	PRESSURE SPRING 12X1 1/8
19	7500108	4	HSG\CAST\BUSH\TANK\DRILL
20	7500562	4	SLV\SQ_HL\5/8X1-7/16\W/5/16_THRU_HL
21	7501058	4	SUP\SHFT\ASSY\SLEEVE\107
22	8400003	4	ROD\COV\TANK\SPG
23	8400004	2	RTNR\TANK\COVER\SPG\LH
24	8400005	2	RTNR\TANK\COVER\SPG\RH
25	8400011	6	CLMP\WHL\COV\HOLD DOWN
26	8400279	1	CUP\SEED\CENTER\RH
27	8400280	1	CUP\SEED\CENTER\LH
28	8400659	1	WHL\FEED\33-1/16\REAR\CTR
29	8400706	1	PL\CNTRL\7"SPACING
30	8400711	1	WHL\FEED\23-15/16\REAR\RH
31	8400713	1	WHL\FEED\19\REAR\LH
32	8400719	4	COV\WHL\FEED\77
41	7500066	96	FEED WHEEL RETAINER CLIP
42	7500006	24	FEED WHEEL COMPLETE
43	7500007	24	FEED WHEEL LEFT HALF (MARK L)
44	7500068	24	FEED WHEEL RIGHT HALF (MARK R)
45	7500107	48	HOSE CLAMP
	NOT SHOWN		
	7500590		ENCL\OPS\8-1/2X11X1-5/8\>



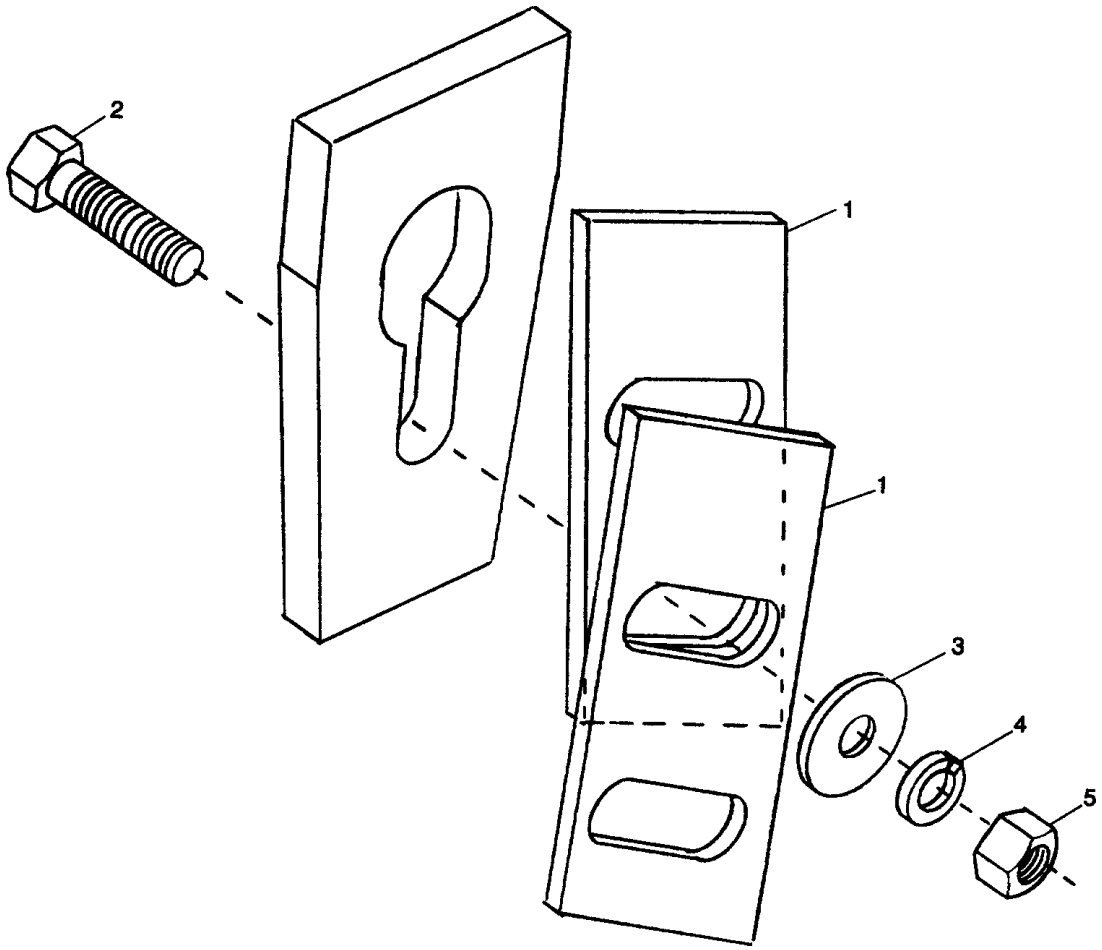
ITEM	PART NO.	QTY.	DESCRIPTION
1	8400244	1	Tank Weldment 106"
2	8400107	2	Tank Cover
3	8400003	4	Tank Cover Spring Rod
4	6100017	4	Tank Cover Spring
5	8400004	2	Tank Cover Spring Retainer L.H.
	8400005	2	Tank Cover Spring Retainer R.H.
6	8400114	1	Control Plate, 7" Spacing
7	8400007	6	Control Plate Guide
8	6100031	6	Control Plate Guide Spring
9	5000002	6	Guide Washer
10	6100002	20	Springs
11	8400110	2	Clean Out Plate
12	8400111	4	Feed Wheel Covers

ITEM	PART NO.	QTY.	DESCRIPTION
13	7500006	36	Feed Wheel Complete
14	7500007	36	Feed Wheel Left Half (Marked L)
15	7500008	36	Feed Wheel Right Half (Marked R)
16	7400066	144	Feed Wheel Retainer Clips
17	7500107	36	Hose Clamp
18	8400011	6	Feed Wheel Cover Hold Down
19	6100002	6	Wheel Cover Hold Down Spring
20	7500110	4	Cast Bracket w/Brg. Complete
21	7500108	4	Cast Bracket
22	7500109	4	Steel Brg. w/Hole
23	5000036	4	Retainer Washer
24	4800169	2	1/4" x 1-1/8" Rolled Pin
25	5000027	4	Washer, 1-3/8" O.D. x 7/8" I.D.
26	4800050	2	3/16" x 1-1/2" Cotter Key
27	8400426	2	Shaft Right Side, 38-7/16"
28	8400423	2	Shaft Center, 33-1/16"
29	8400425	2	Shaft Left Side. 34-1/2
30	8700016	4	Seed Cup End Section
31	8700015	4	Seed Cup Center Section
32	8300236	8	1/2" Flat Washer w/40° Brk.
33	4800044	8	5/32" x 1-1/2" Cotter Key
34	4800156	6	3/8" x 3" Hex Bolt
35	4900030	6	3/8" Plastic Insert Lock Nut
36	4800053	26	3/8" x 1" Carriage Bolt
37	4800012	6	3/8" x 1-1/4" Carriage Bolt
38	5000001	20	3/8" Flat Washer
39	5000019	40	3/8" Lock Washer
40	4900002	40	3/8" Hex Nut
41	4800003	8	3/8" x 1" Hex Bolt
42	4800170	6	5/16" x 3-1/2" Bolt
43	5000022	6	5/16" Lock Washer
44	4900003	6	5/16" Hex Nut
45	4800396	6	7/16" x 2" Bolt
46	4800114	19	1/2" x 2" Bolt
47	4900014	19	1/2" Top Lock Nut
48	5000016	25	7/16" Flat Washer
49	6500022	1	Calibration Decal, 7" Spacing
50	8400112	2	Clean Out Handle
51	8400245	1	Control Plate 7" Spacing (Grass)
52	8400248	1	Seed Cup Left End Section (Grass)
53	8400249	1	Seed Cup Left Center Section (Grass)
54	8400250	1	Seed Cup Right Center Section (Grass)
55	8400251	1	Seed Cup Right End Section (Grass)
56	3800082	6	1/4" Tapered St. Zerk
57	7500134	4	Grommet
58	4800068	4	1/2" x 3" Bolt
59	5000004	12	1/2" Flat Washer
60	8400318	2	Divider Cover
61	4800164	28	3/8" x 3/4" Bolt
62	5000001	28	3/8" Flat Washer
63	5000019	28	3/8" Lock Washer
64	8400467	2	Wind Guard (Not Shown)
65	8400462	1	Seed Cup Left End Section (Rear) Not Shown
66	8400280	1	Seed Cup Left Center Section (Rear) Not Shown
67	8400463	1	Seed Cup Right End Section (Rear) Not Shown
68	8400279	1	Seed Cup Right Center Section (Rear) Not Shown
69	4900035	6	7/16" Toplock Nut

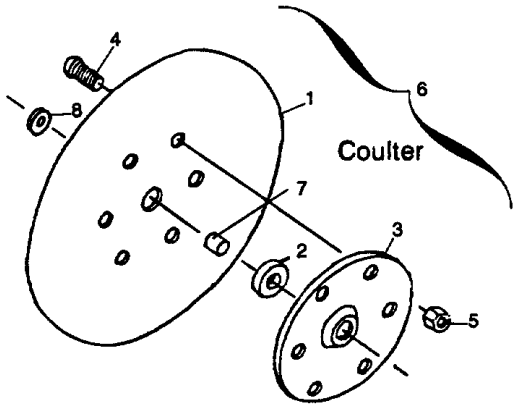


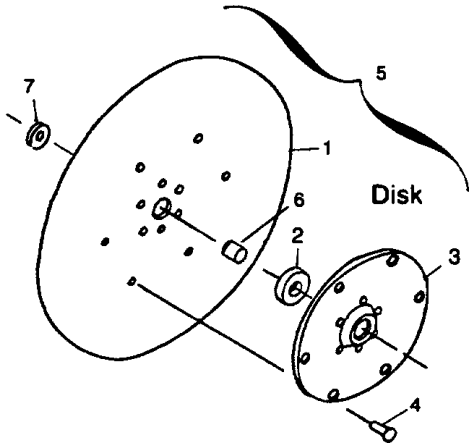
ITEM	PART NO.	QTY.	DESCRIPTION
1	2000313	1	BRG\FLG\CAST\3/4\2BOLT
2	3600053	1	FTG\LUB\1/4NFXZERK\ADAPT
3	4800013	2	BOLT\HEX\5/16X1
4	4800153	4	BOLT\CRG\5/16X3/4\NC
5	4900003	6	NUT\HEX\5/16\NC
6	5000022	4	WASH\LOCK\5/16
7	5000023	4	WASH\FLAT\5/16
8	7500071	1	CALIBRATION POINTER NUT
9	7500072	1	CALIBRATION CONTRL PL NUT
10	7500073	1	CALIBRATION SHAFT #6620
11	8400060	1	HDL\CAL
12	8400262	1	PL\DECAL\CAL\DUAL_USE\107
	NOT SHOWN		
	6500016		DECAL\INFO\CAL;SCALE;GRAN
	6500017		DECAL\INFO\CAL.SCALE;FERT
	6500081		DECAL\INFO\CAL.SCALE;>

ITEM	PART NO.	QTY.	DESCRIPTION
	8400091		**Scraper Assembly - Complete**
1	8400670	2	Scraper\Disc
2	4800071	1	5/16" x 1-1/4" Bolt
3	5000023	1	5/16" Flat Washer
4	5000022	1	5/16" Lock Washer
5	4900003	1	5/16" Hex Nut



COULTER & DISK ASSEMBLY

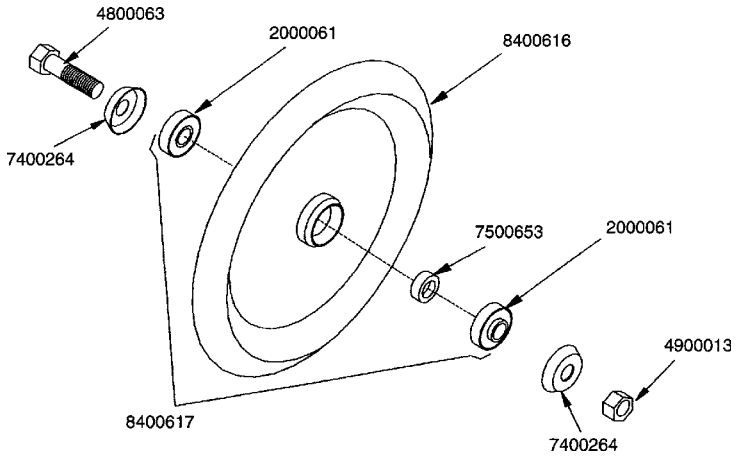




ITEM	PART NO.	QTY.	DESCRIPTION
1	7500064	1	Coulter, 14" - 6 Hole
2	2000031	1	Brg.
3	7500165	1	Cage
4	4800161	6	1/2" - 13 x 1" Button Hd. Socket Screw
5	4900014	6	Lock Nut, 1/2"
6	7500187	1	Coulter (Complete)
7	7500160	1	Sleeve
8	5000009	2	Shim Washer

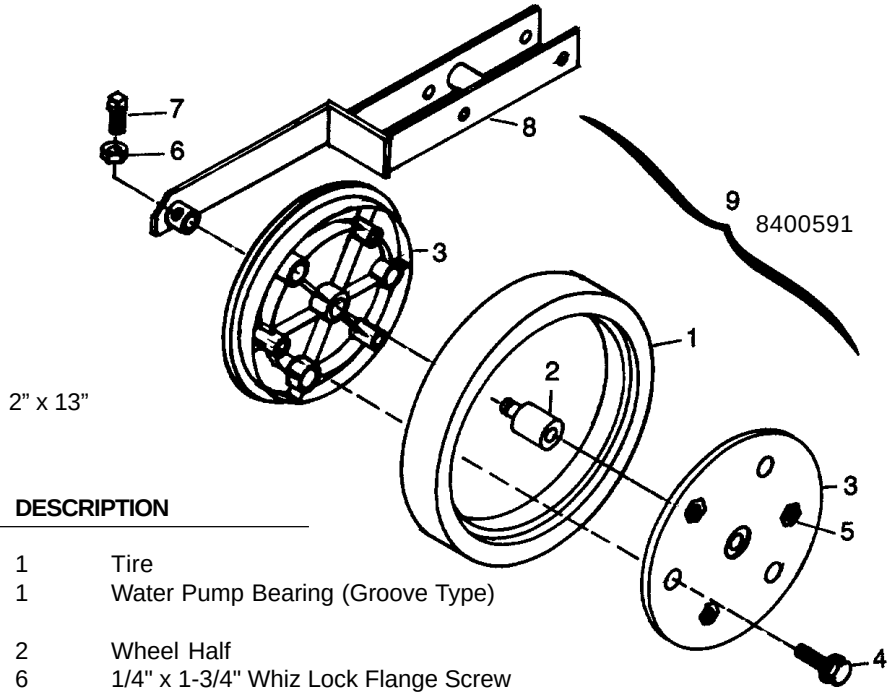
ITEM	PART NO.	QTY.	DESCRIPTION
1	7500010	1	Disk, 14"
2	2000031	1	Brg.
3	7500167	1	Cage
4	4800039	12	Rivets, 1/4" x 1/2"
5	7500188	1	Disk (Complete)
6	7500160	1	Sleeve
7	5000009	2	Shim Washers

PRESS WHEEL ASSEMBLY



TO RETROFIT DRILL WITH SERIAL NO. 1550 & UP
ORDER PART 8400617 & 4800063

PART NO.	QTY.	DESCRIPTION
8400617		Press Wheel Assembly
2000061	2	Brg/3/4/FHR204-12
7500653	1	Spcr/Wheel/Packer/107
8400616	1	Whl/Stl; Packer/107
7400264	2	Packer Wheel Cap - No Pilot
4800063	1	Bolt\Hex\3/4 x 4
4900139	1	Nut\Toplock\3/4



ITEM	PART NO.	QTY.	DESCRIPTION
1	2600015	1	Tire
2	2000039	1	Water Pump Bearing (Groove Type)
3	2600628	2	Wheel Half
4	4800280	6	1/4" x 1-3/4" Whiz Lock Flange Screw
5	4900009	6	1/4" Hex Nut
6	4900026	1	3/8" Jam Nut
7	4800250	1	3/8" x 3/4" Sq. Head Set Screw
8	8400347	1	Packer Wheel Frame
9	2600801	1	2" x 13" Wheel Complete

Limited had PN 7500076 on this frame.

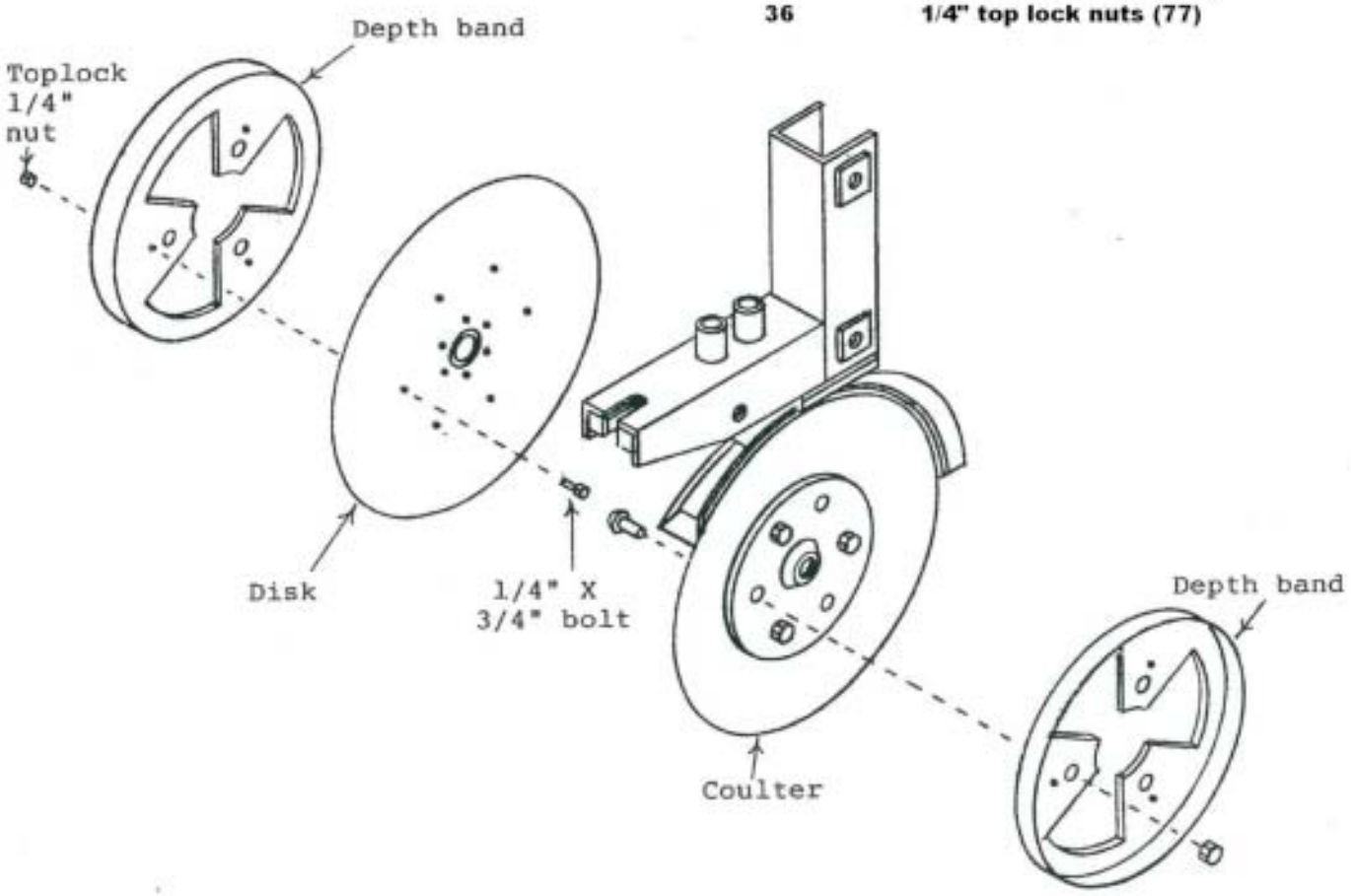

HAYBUSTER®
A Tradition of Innovation Since 1966

Depth Band Installation

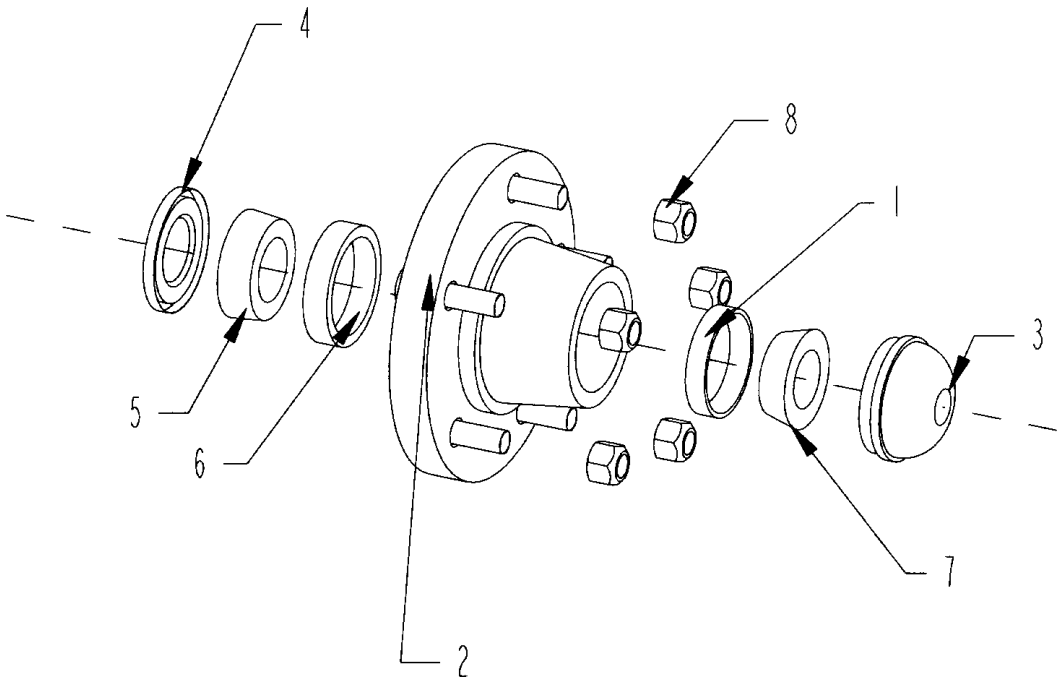
Step 1. Remove disk as shown in illustration
Step 2. Remove the three rivets matching small holes in depth band from the disk
Step 3. Bolt depth band to disk using (3) 1/4" X 3/4" bolts and (3) 1/4" toplock nuts
Step 4. Remove the three bolts matching large holes in depth band from the coulter. It is not necessary to remove coulter from opener.
Step 5. Using bolts removed in step 4, bolt depth band to coulter.
Step 6. Reinstall disk on opener

Depth Band Kit

Qty per drill	Description
36	Depth Bands Part # 8400645 (107)
24	Depth Bands Part # 8400729 (77)
54	1/4" x 3/4" bolts (107)
36	1/4" x 3/4" bolts (77)
54	1/4" top lock nuts (107)
36	1/4" top lock nuts (77)



HUB ASSEMBLY

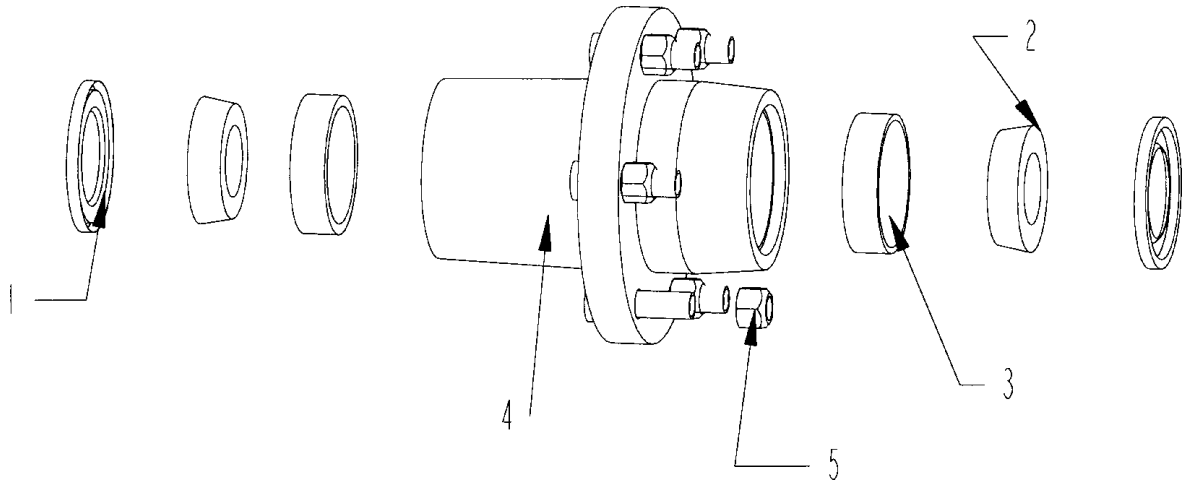


HUB ASSEMBLY

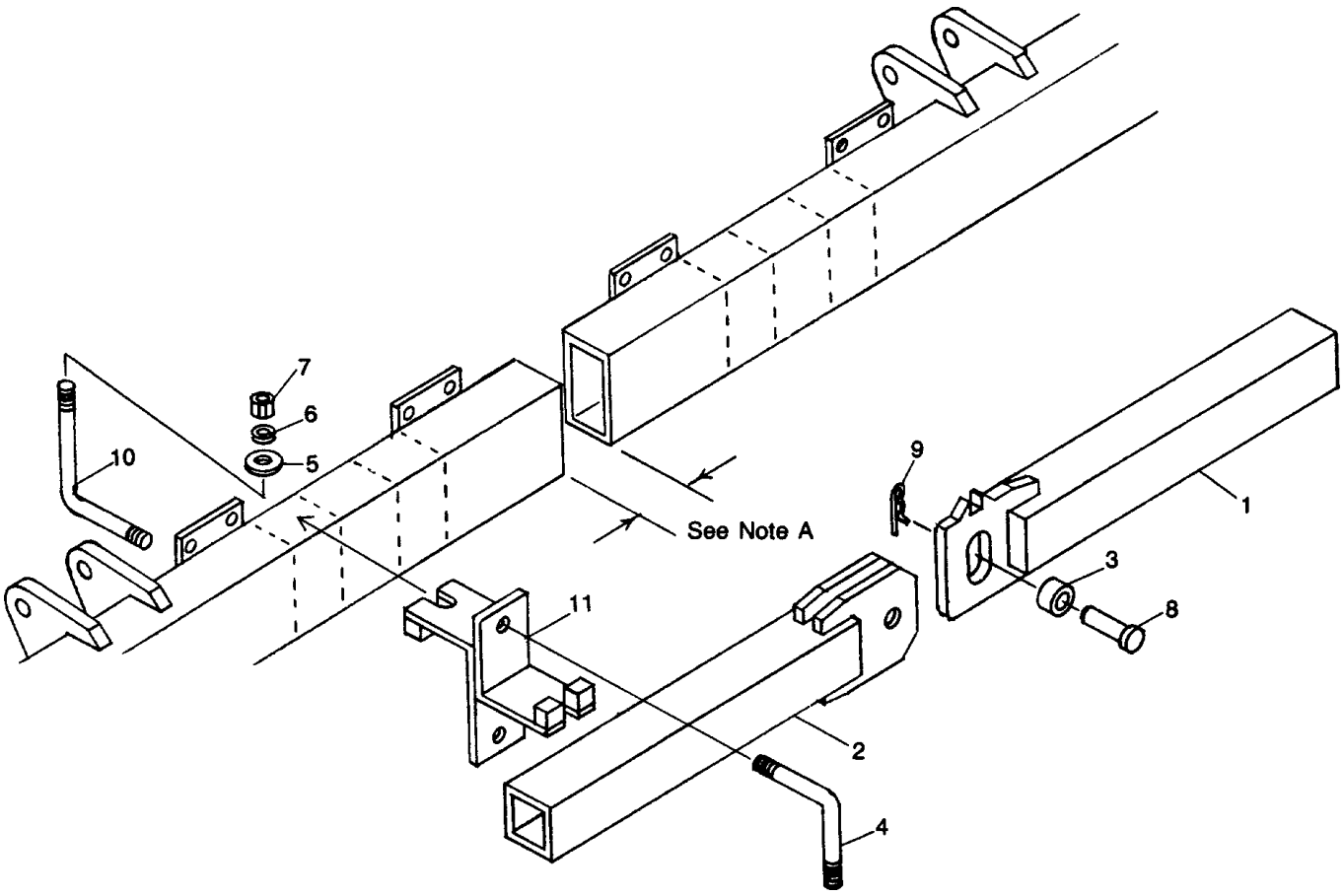
ITEM	PART NO.	QTY.	DESCRIPTION
1	2900004	1	CUP\INNER\WHEEL HUB
2	2900011	1	HUB\WITH CONES\W/NUTS
3	2900013	1	CAP\DUST\WHL;HUB(DC-13)
4	2900014	1	SEAL\GREASE(517) (15190)
5	2900015	1	CONE\INNER/WHL HUB(48548)
6	2900016	1	CUP\INNER\WHL:HUB(48510
7	2900018	1	CONE\OUTER\WHL;HUB(67048
8	4900094	5	NUT\TAPER\WHEEL\1/2\NF\

HUB FORK ASSEMBLY

ITEM	PART NO.	QTY.	DESCRIPTION
1	2900085	2	SEAL\WHL;HUB(20078)
2	2900086	2	CONE\2788\WHL;HUB
3	2900087	2	CUP\BRG\HUB\WHL\2720
4	2900089	1	HUB\H-628(FORK)\COMPLETE
5	2900083	6	NUT\WHL\9/16-18\UNF



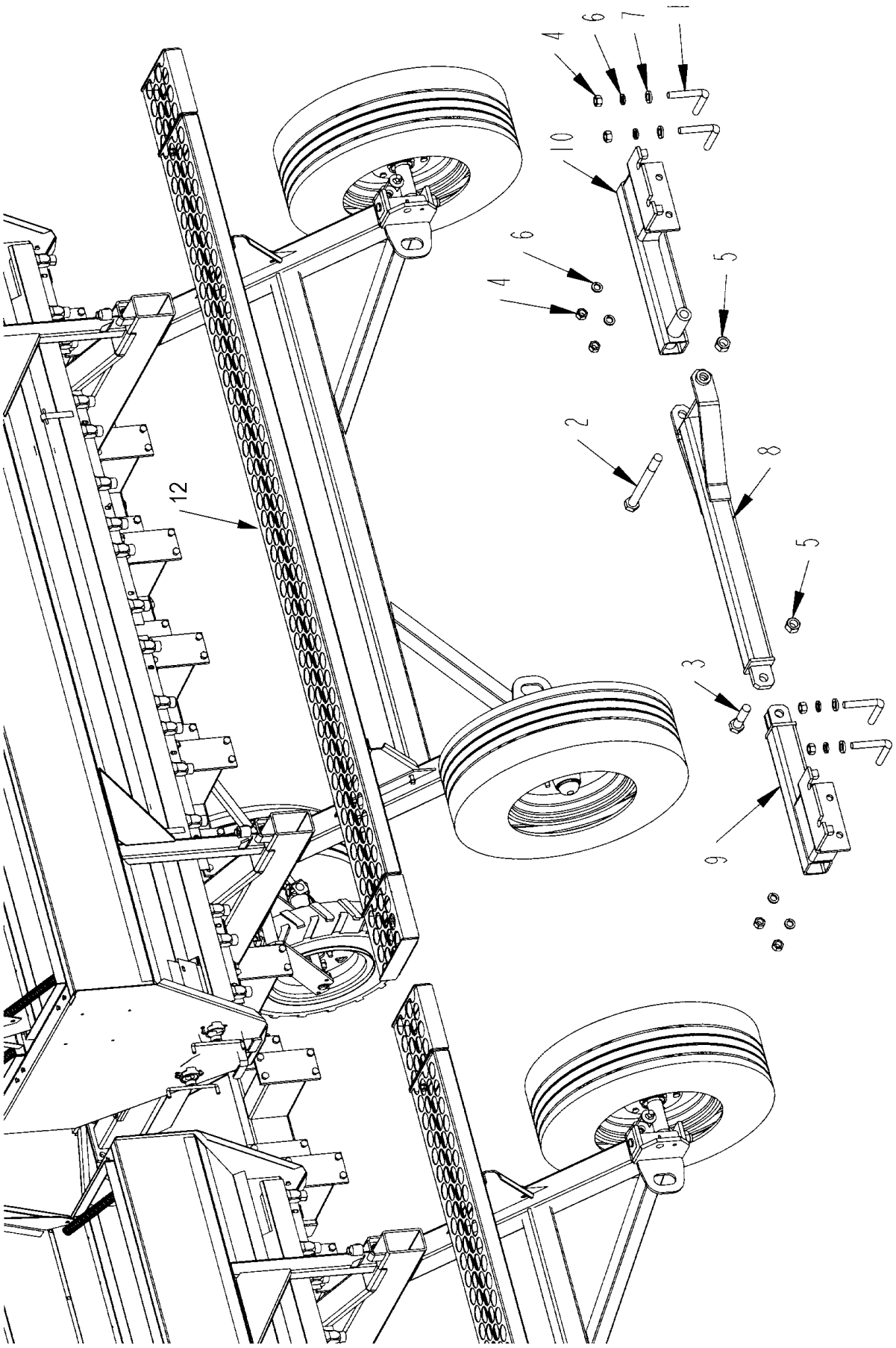
NOTE: For drill with disc type banding openers, mount stabilizer in front of banding tool bar. See illustration.



NOTE: A
Space tool bars 3" apart for 7" spacing.
Space tool bars 10" apart for paired row 6-14 spacing.
Mount double clamps as far apart as possible.
Space tool bars 6" apart for 10" spacing.

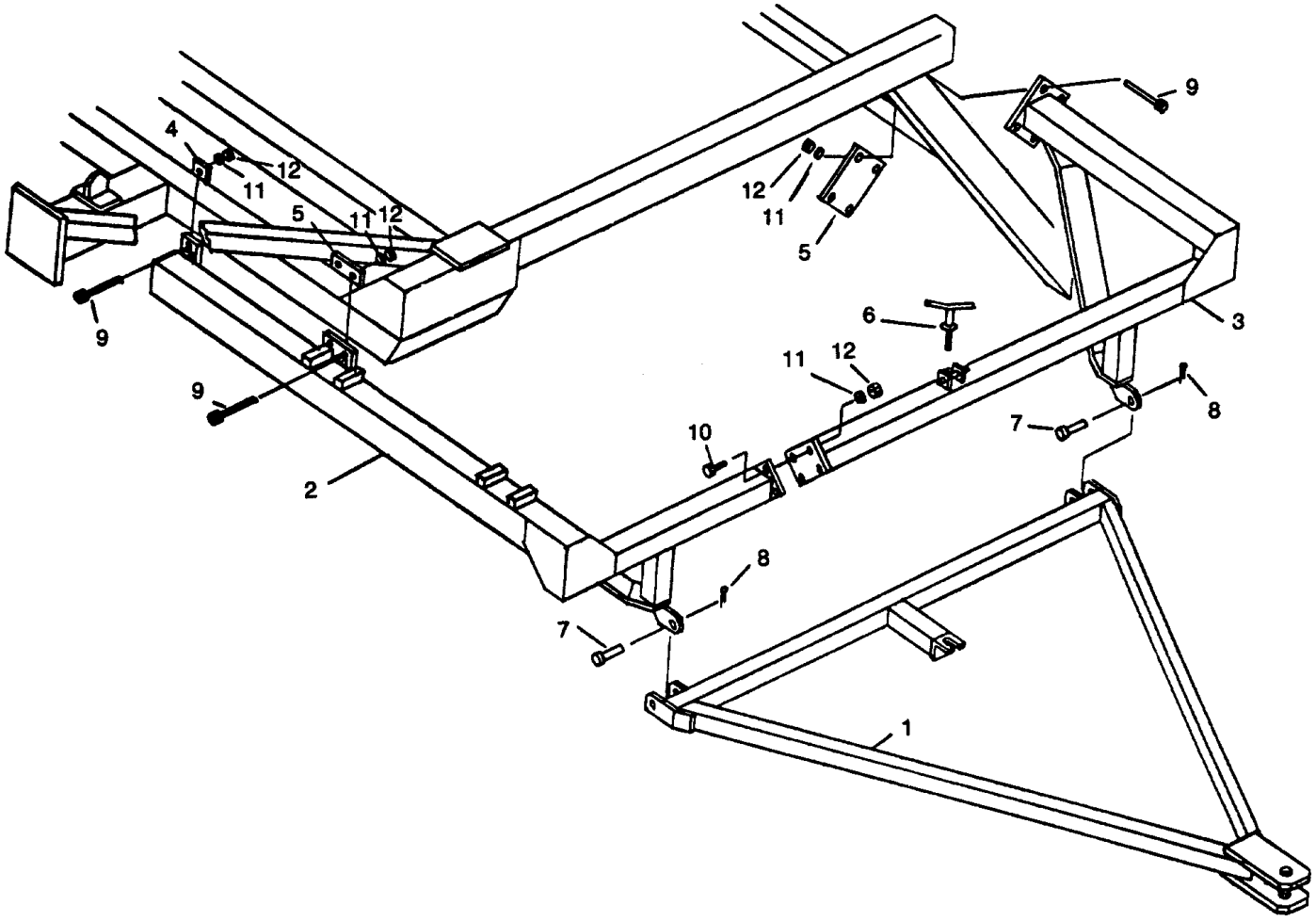
ITEM	PART NO.	QTY.	DESCRIPTION
1	8400183	1	Male Stabilizer
2	8400184	1	Female Stabilizer
3	8400185	1	1-1/2" O.D. x 1" I.D. Bushing
4	4800183	4	3/4" L-Bolt 5-1/4" O.D. x 5-1/4" O.D.
5	5000005	8	3/4" Flat Washer
6	5000012	16	3/4" Lock Washer
7	4900004	16	3/4" Hex Nut
8	4800185	1	1" x 3" Clevis Pin
9	4800157	1	3/16" x 2" Cotter Key
10	4800199	4	3/4" L-Bolt 5-1/4" O.D. x 7-1/4" O.D.
11	8400186	4	Double Clamp

REAR STABILIZER OPTION (107 ONLY)



ITEM	PART NO.	QTY.	DESCRIPTION
1	4800183	4	BOLT\L\3/4\5-1/4X5-1/4
2	4800626	1	BOLT\HEX\1X11\NC
3	4800647	1	BOLT\HEX\1X4\NC
4	4900004	8	NUT\HEX\3\4\NC
5	4900015	2	NUT\NYLCK\1\NC
6	5000012	8	WASH\LOCK\3/4
7	5000115	4	WASH\FLAT\3/4\EXTRTHK\GR8
8	8400201	1	BAR\STBLZR\CTR\REAR
9	8400202	1	MNT\STBLZR\RH\REAR
10	8400203	1	MNT\STBLZR\LH\REAR
11	8400378	1	Rear Stabilizer Kit 2 Drill
12	8400040		WALKWAY\100_SERIES

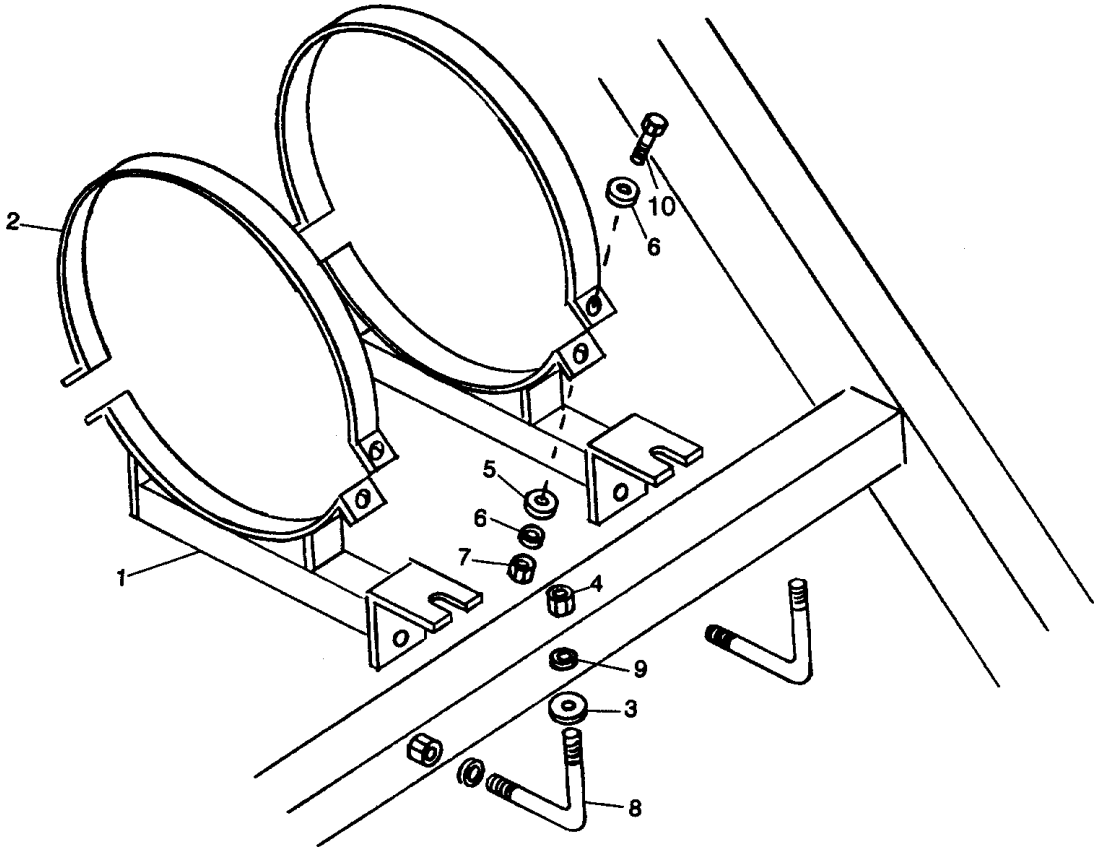
TOW HITCH (107 ONLY)

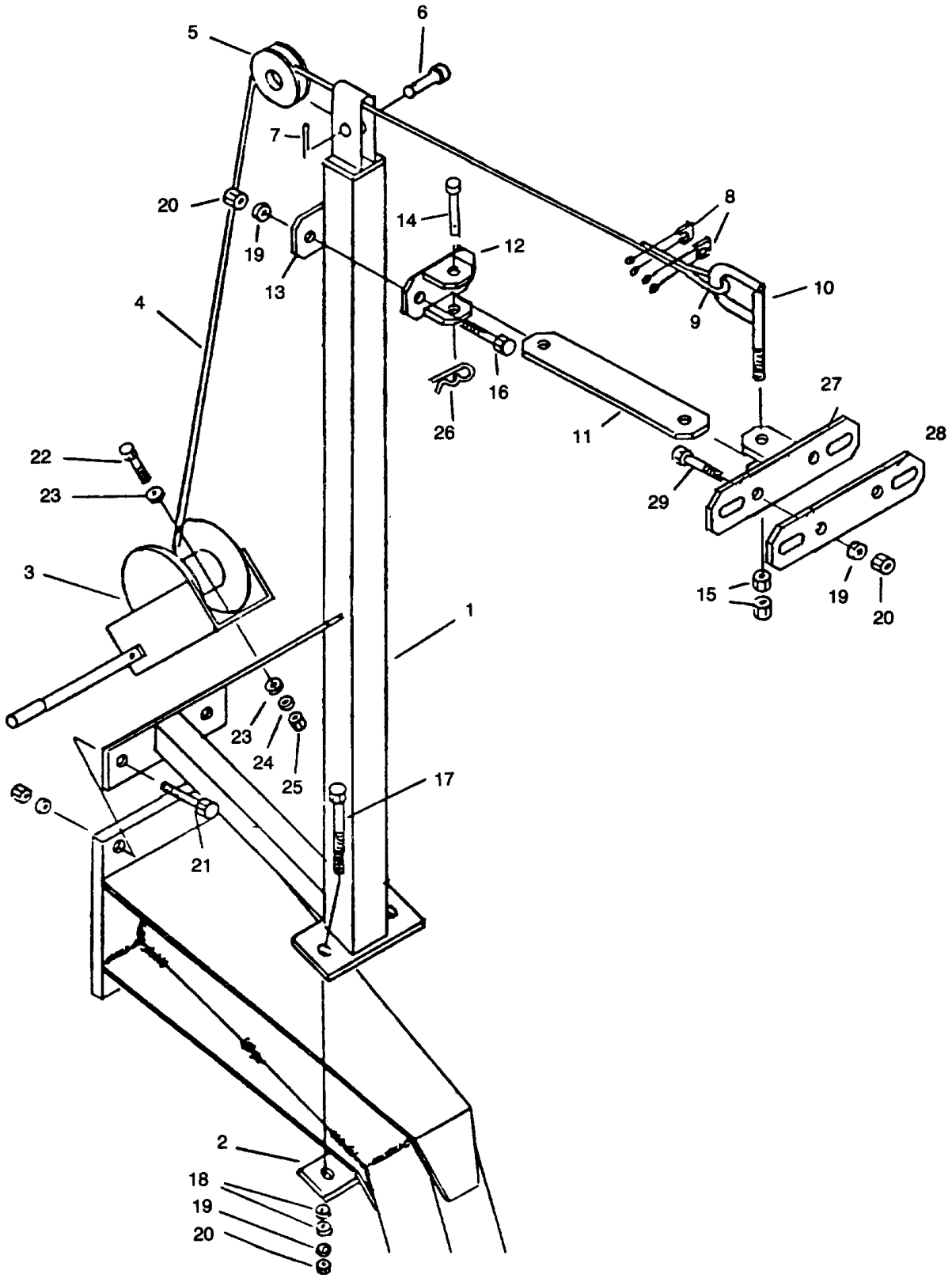


ITEM	PART NO.	QTY.	DESCRIPTION
1	8400226	1	End Tow Hitch
2	8400227	1	Front Mount
3	8400228	1	Rear Mount
4	8400229	1	Front Mount Strap
5	8400230	2	Mount Straps
6	8400231	1	Hold Up Handle for End Tow Hitch
7	4800046	2	3/4" x 3" Pin
8	4800050	2	3/16" x 1-1/2" Cotter Pin
9	4800041	10	1/2" x 5" Bolt
10	4800082	4	1/2" x 1-1/2" Bolt
11	5000006	14	1/2" Lock Washer
12	4900001	14	1/2" Hex Nut

BALLAST BRACKET (77 & 107)

ITEM	PART NO.	QTY.	DESCRIPTION
1	8400211	4	Saddle
2	8400178	4	TLE Strap
3	5000005	8	3/4" Flat Washer
4	4900004	8	3/4" Hex Nut
5	5000001	8	3/8" Flat Washer
6	5000019	8	3/8" Lock Washer
7	4900002	8	3/8" Hex Nut
8	4800183	4	3/4" L-Bolt
9	5000012	8	3/4" Lock Washer
10	4800146	8	3/8" x 2" Bolt
	8400474		Kit - 2 Barrel Mount Bracket




6
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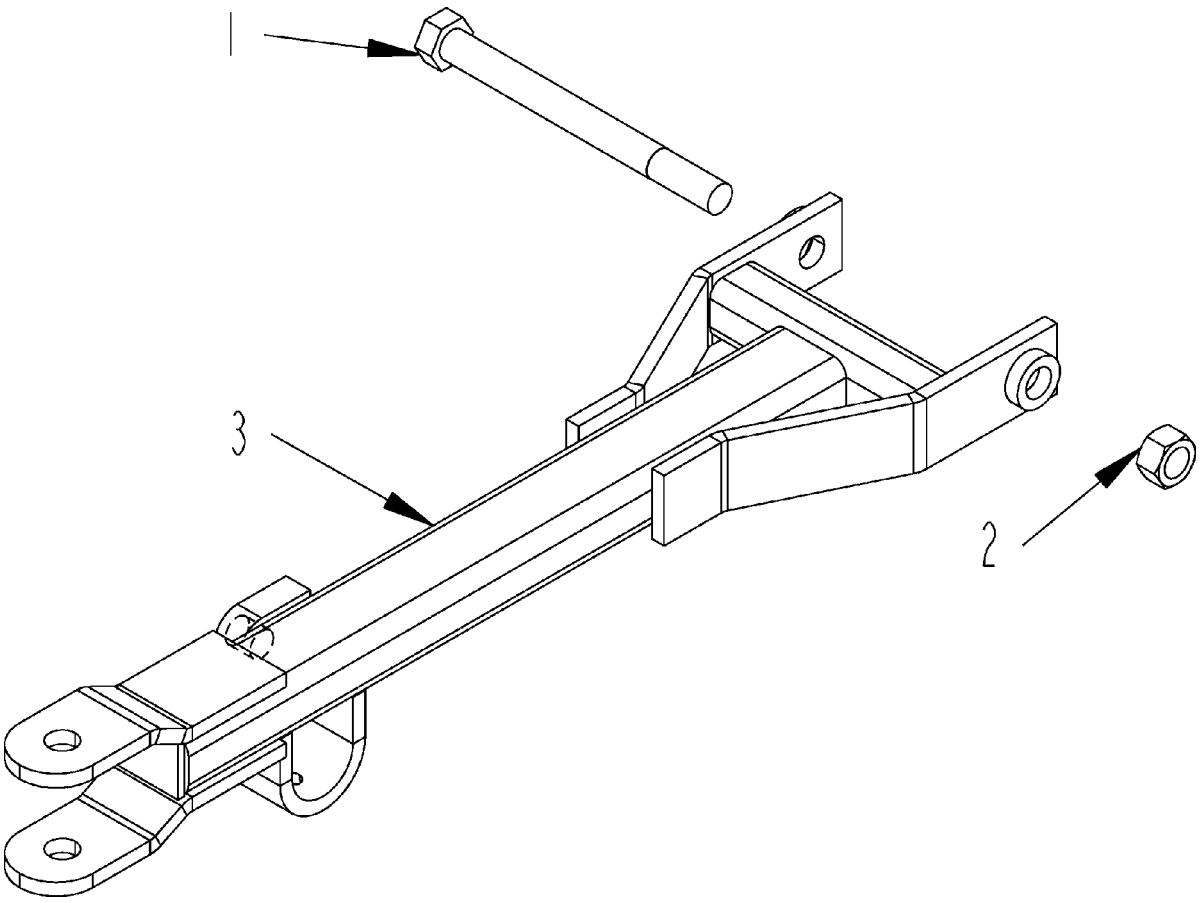
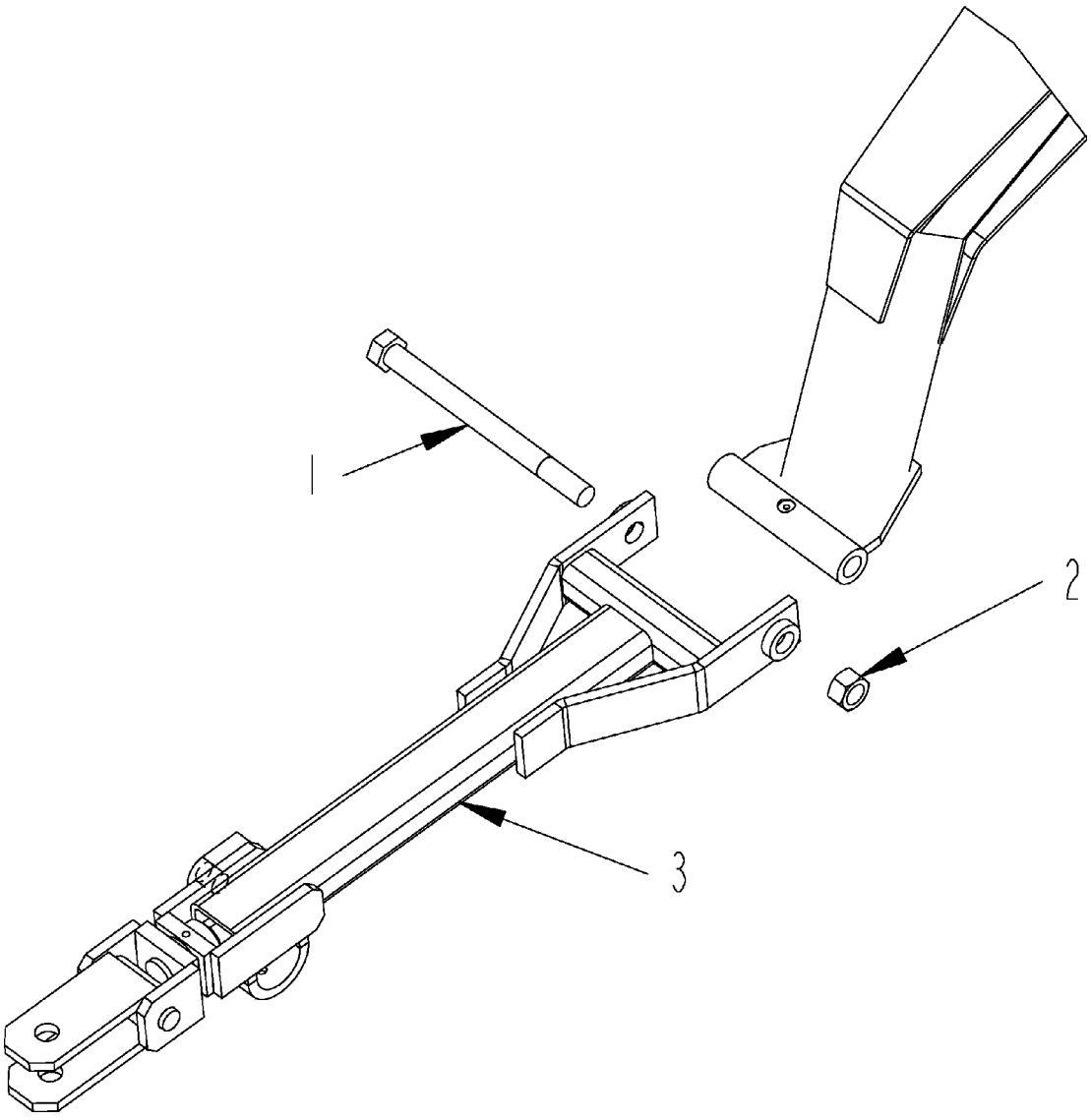
ITEM	PART NO.	QTY.	DESCRIPTION
	8400589		**Hitch Lift Kit (only for 3 or more drill hitch set-up)**
1	8300293	1	Lift Frame
2	8300294	1	Lift Mount Strap 2" x 6"
3	5800004	1	Winch
4	5800311	1	1/4" Cable 12' Long
5	1400082	1	Cable Sheaves
6	4800030	1	5/8" x 2" Clevis Pin
7	4800123	1	1/8" x 1 -1/2" Cotter Pin
8	4800027	2	1/4" Cable Clamp
9	7500121		1/4" Cable Thimble
10	8300356	1	I Bolt
11	8300295	1	Hold Up Bar 2" x 11-1/2"
12	8300296	1	Hold Up Bar Mount 4-1/2" Long
13	8300297	1	Hold Up Bar Strap 4-1/2" Long x 2"
14	4800119	1	5/8" x 3-1/2" Clevis Pin
15	4900005	4	5/8" Nuts
16	4800188	2	1/2" x 4" Bolt
17	4800235	2	1/2" x 6-1/2" Bolt
18	5000004	4	1/2" Flat Washer
19	5000006	6	1/2" Lock Washer
20	4900001	6	1/2" Hex Nut
21	4800017	2	3/4" x 3" Bolt
22	4800098	3	3/8" x 1-1/4" Bolt
23	5000001	6	3/8" Flat Washer
24	5000019	3	3/8" Lock Washer
25	4900002	3	3/8" Hex Nut
26	4800107	1	1-1/8" Hair Pin
27	8300298	1	Hold Up Bar Mount
28	8300299	1	Hold Up Bar Strap
29	4800188	2	1/2" x 4" Hex Bolt
	4800141	2	1/2" x 4-1/2" Hex Bolt

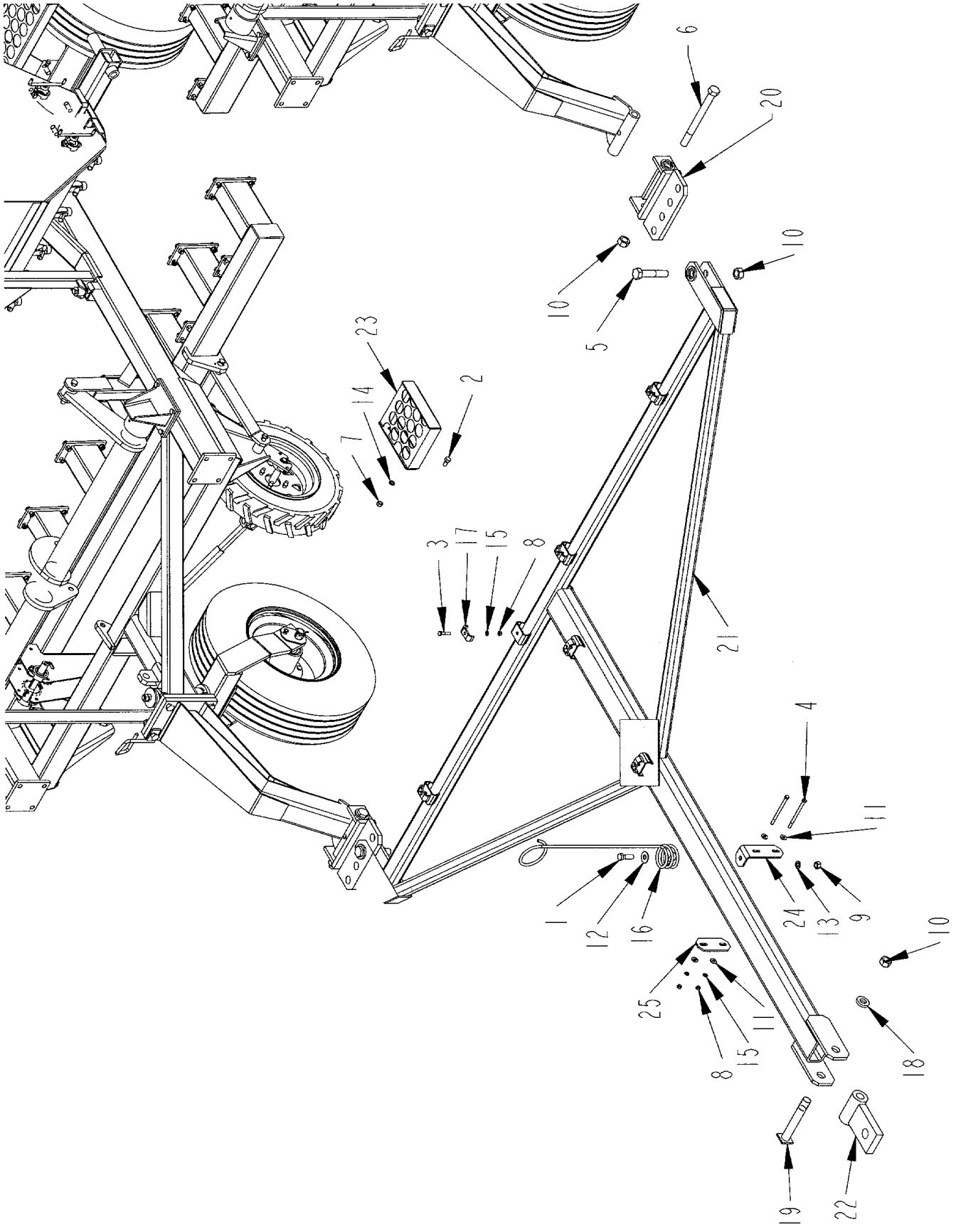


ITEM	PART NO.	QTY.	DESCRIPTION
1	4800626	1	BOLT\HEX\1X11\NC
2	4900015	1	NUT\HEX\7/16\NC
3	8400664	1	HITCH\SINGLE\107&8000
NOT SHOWN			
	1100275	1	CHAIN\1/4\SFTY\AG\11000LB
	5000113	1	WASH\FLAT\1/2\EXTRATHK\GR8

ITEM	PART NO.	QTY.	DESCRIPTION
1	4800623	1	BOLT\HEX\1X12\NC
2	4900015	1	NUT\NYLCK\1\NC
3	8400650	1	HITCH\W/SWIVEL\107
NOT SHOWN			
	1100275	1	CHAIN\1/4\SFTY\AG\11000LB
	5000113	1	WASH\FLAT\1/2\EXTRTHK\GR8



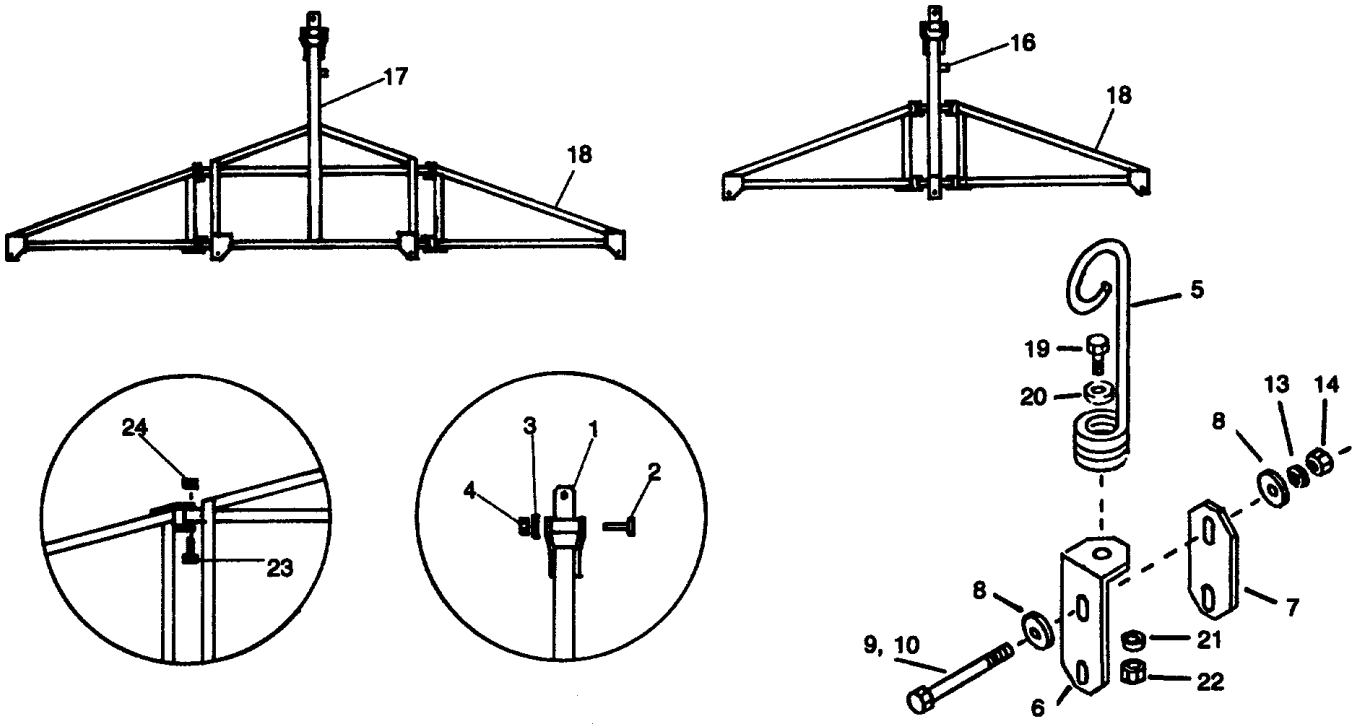
2 DRILL HITCH (107 ONLY)



2 DRILL HITCH (107 ONLY)

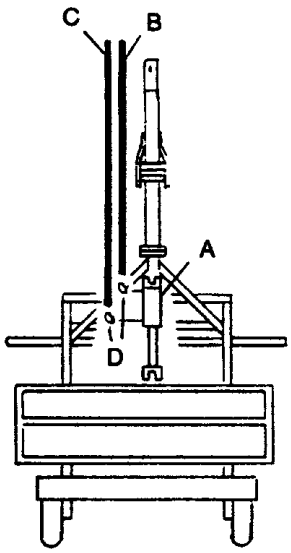
ITEM	PART NO.	QTY.	DESCRIPTION
1	4800010	1	BOLT\HEX\5/8X2
2	4800085	8	BOLT\HEX\1/2X1
3	4800125	10	BOLT\HEX\3/8X1-3/4
4	4800226	2	BOLT\HEX\3/8X5-1/2
5	4800546	2	BOLT\HEX\1X5\NC
6	4800626	2	BOLT\HEX\1X11\NC
7	4900001	8	NUT\HEX\1/2\NC
8	4900002	12	NUT\HEX\3/8\NC
9	4900005	1	NUT\HEX\5/8\NC
10	4900015	5	NUT\NYLCK\1\NC
11	5000001	4	WASH\FLAT\3/8
12	5000002	1	WASH\FLAT\5/8
13	5000003	1	WASH\LOCK\5/8
14	5000006	8	WASH\LOCK\1/2
15	5000019	12	WASH\LOCK\3/8
16	7500170	1	HOSE MINDER
17	4700777	10	CLMP\HOSE\1/2
18	8300341	1	WASH\2X1.028X3/8
19	8300498	1	PIN\HITCH
20	8400034	2	HITCH\BLK
21	8400193	1	HITCH\2\DRILL\107
22	8400196	1	BLK\HITCH
	OR		
	8400667	1	BLK\HITCH\CLEVIS
23	8400666	4	STEP\XTNSN\WLKWY
24	8800095	1	MNT\MINDER\HOSE\DRILL
25	8800096	1	STRAP\MINDER\HOSE\DRILL
	8400394	1	2 DRILL HITCH KIT (INCLUDES REAR STABILIZER KIT)

3-4 DRILL HITCH (107 ONLY)



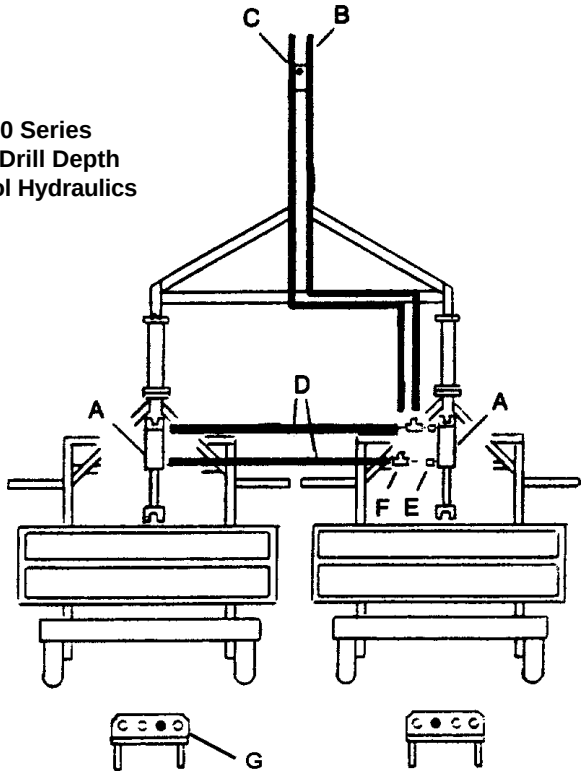
ITEM	PART NO.	QTY.	DESCRIPTION
1	8400196	1	Hitch Block
2	8300498	1	Hitch Block Pin
3	8300341	1	2" O.D. x 1.028 I.D. 3/8" Thick Washer
4	4900015	1	1" Nylon Insert Nut
5	7500170	2	Hose Minder
6	8800095	2	Hose Minder Mount
7	8800096	2	Hose Minder Strap
8	5000001	4	3/8" Flat Washer
9	4800226	2	3/8" x 5-1/2" Bolt
10	4800089	2	3/8" x 4" Bolt
11	4700777	4	CLMP\HOSE\1/2
12	4800142	4	3/8" x 1-3/4" Bolt
13	5000019	8	3/8" Lock Washer
14	4900002	8	3/8" Nut
15	5800601	1	Jack 2 SM-10
16	8400194	1	3" Drill Center Pole
17	8400197	1	4" Drill Center Pole
18	8400195	2	Small Wings
19	4800010	2	5/8" x 2" Bolt
20	5000002	2	5/8" Flat Washer
21	5000003	2	5/8" Lock Washer
22	4900005	2	5/8" Nut
23	4800187	4	1" x 6" Bolt
24	4900015	4	1" Nylon Insert Nut
25	8300497	1 Per Drill	1" x 6" Hitch Pin
26	4800103	1 Per Drill	1/4" x 2" Cotter Pin

100 Series
Single Drill Depth
Control Hydraulics

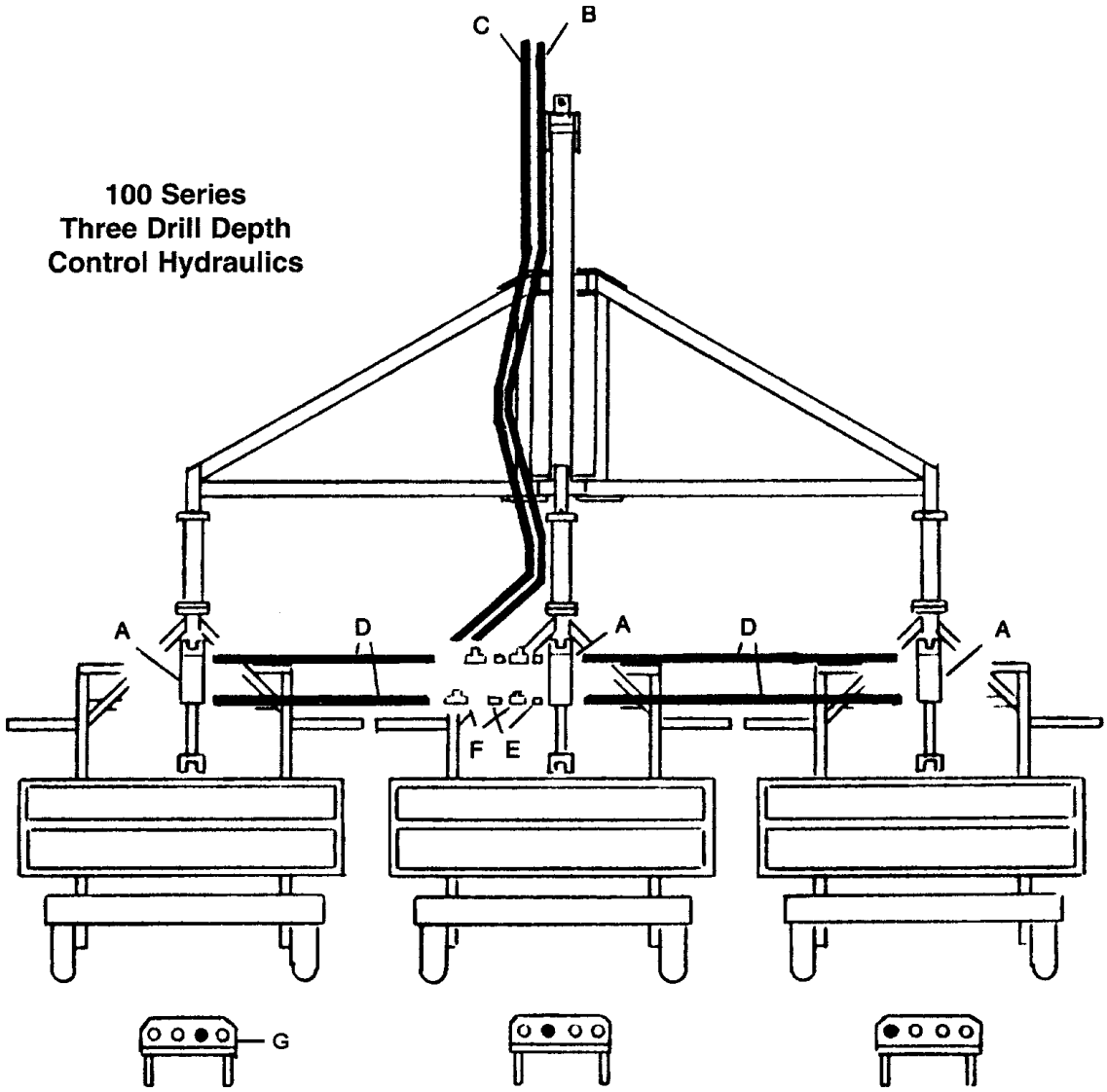


ITEM	PART NO.	QTY.	DESCRIPTION
A	4100039	1	3" x 8" Cylinder
B	3700153	1	108" - 1/2" Hose
C	3700151	1	120" - 1/2" Hose
D	3800008	2	90° St. Elbow

100 Series
Two Drill Depth
Control Hydraulics



ITEM	PART NO.	QTY.	DESCRIPTION
A	4100039	2	3" x 8" Cylinder
B	3700119	1	216" - 1/2" Hose
C	3700120	1	240" - 1/2" Hose
D	3700061	2	132" - 1/2" Hose
E	3800086	2	1/2" x 1-1/2" Nipple
F	3800009	2	1/2" Tee
G	8400034		HITCH\BLOCK\107
	NOT SHOWN		
	4100045		3x8 Seal Kit - Hyd Cyl. FOR 4100039

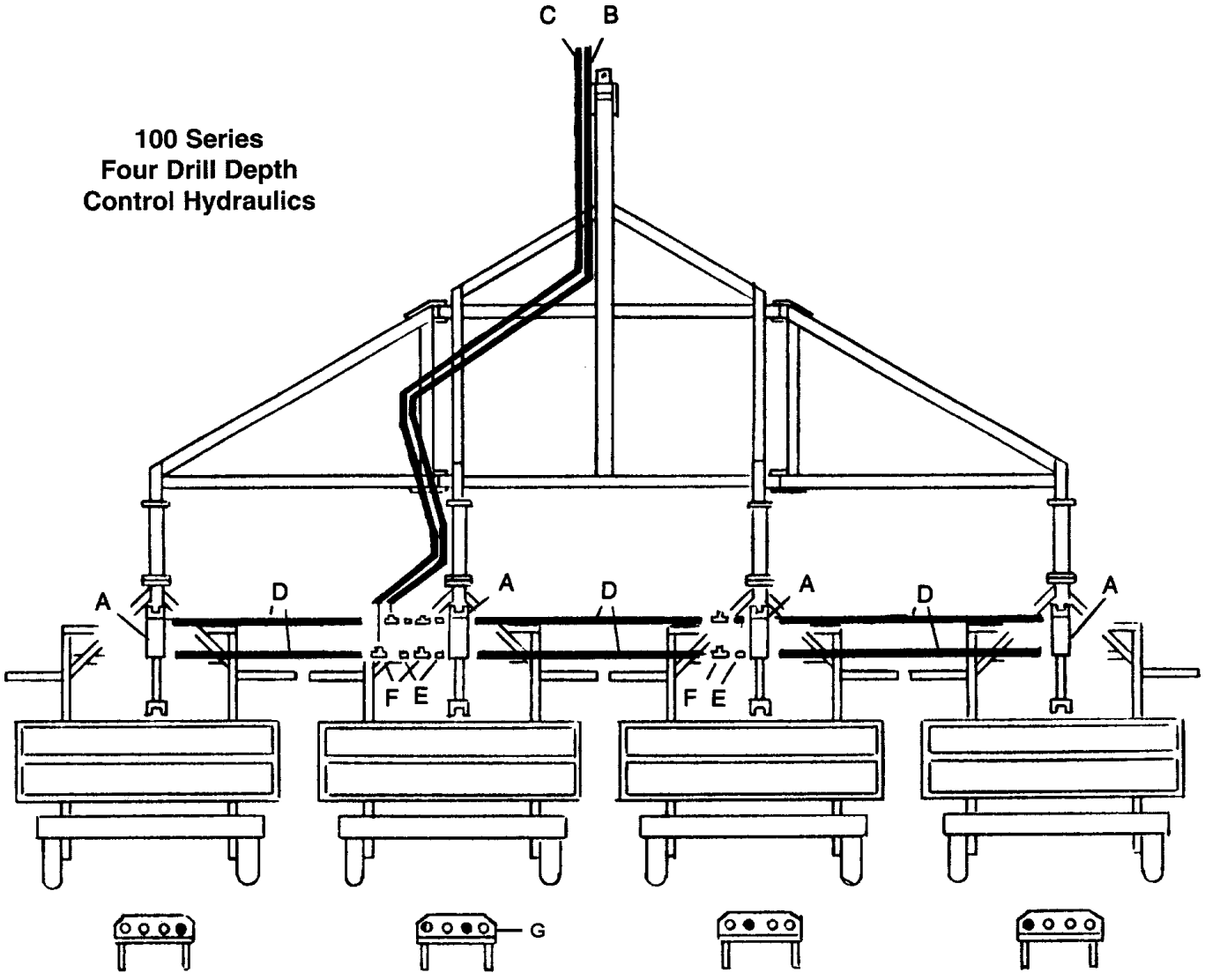


ITEM	PART NO.	QTY.	DESCRIPTION
A	4100039	3	3" x 8" Cylinder
B	3700118	1	192" - 1 /2" Hose
C	3700119	1	216" - 1/2" Hose
D	3700061	4	132" - 1/2" Hose SW-SO
E	3800086	4	1/2" x 1-1/2" Nipple
F	3800009	4	1/2" Tee
G	8400034		HITCH\BLOCK\107
	NOT SHOWN		
	4100045		3x8 Seal Kit - Hyd Cyl. FOR 4100039

ITEM	PART NO.	QTY.	DESCRIPTION
A	4100039	4	3" x 8" Cylinder
B	3700095	1	252" - 1/2" Hose SW-SO
C	3700101	1	276" - 1/2" Hose SW-SO
D	3700061	6	132" - 1/2" Hose SW-SO
E	3800086	6	1/2" x 1-1/2" Nipple
F	3800009	6	1/2" Tee
G	8400034		HITCH\BLOCK\107

NOT SHOWN

4100045		3x8 Seal Kit - Hyd Cyl. FOR 4100039

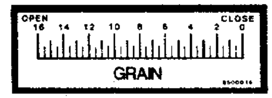


1 HAYBUSTER

2 107

2A 77

3
IMPORTANT
AVOID MAKING SHARP TURNS WITH OPENERS IN THE GROUND

4


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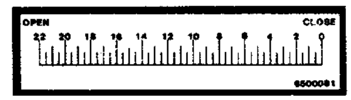

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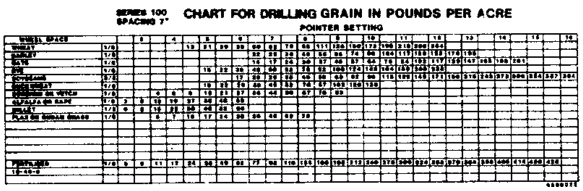

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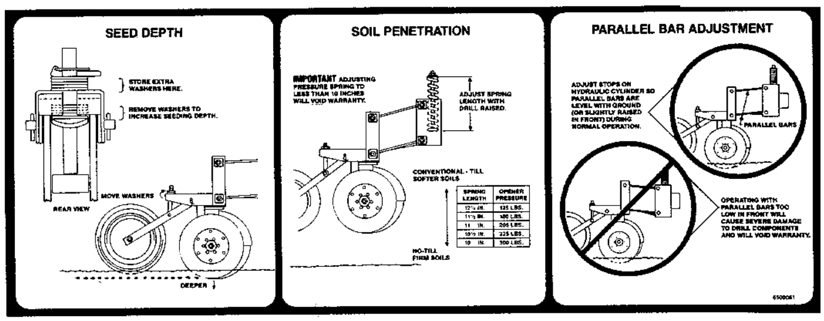
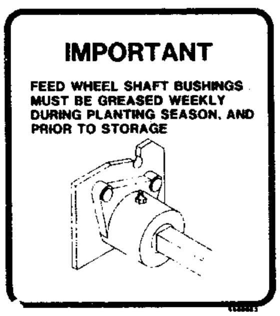


8
IMPORTANT

TRANSPORTING DRILL WITH FERTILIZER AND GRAIN IN TANKS IS NOT ADVISED. SETTLING OF FERTILIZER MAY OCCUR IF LEFT OVER A PERIOD OF TIME OR DURING TRANSPORT. MAKE SURE FERTILIZER SHAFT TURNS FREELY BEFORE FILLING TANK.

STORAGE

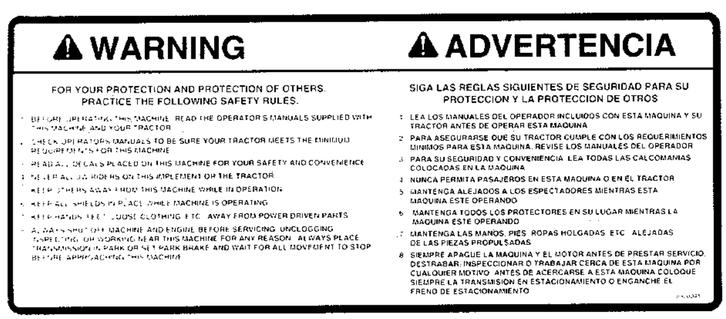
DO NOT LEAVE FERTILIZER IN CONTACT WITH METAL PARTS FOR A PROLONGED PERIOD. FLUSH WITH WATER - LET DRY - APPLY A COAT OF OIL OR DIESEL FUEL BEFORE STORING.

9


10


11
KEEP WHEEL BOLTS TIGHT

12
ENGAGE LOCKS AFTER DRILLS ARE RAISED FOR TRANSPORT
DISENGAGE BEFORE LOWERING

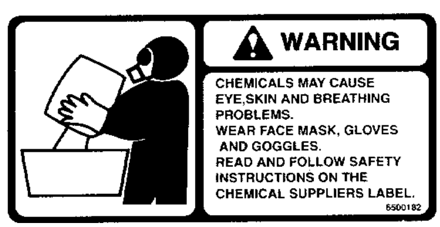
13


14
WARNING

FOR YOUR PROTECTION KEEP ALL SHIELDS IN PLACE AND SECURED WHILE MACHINE IS OPERATING. MOVING PARTS WITHIN CAN CAUSE SEVERE PERSONAL INJURY

ADVERTENCIA

PARA ASEGURAR SU PROTECCION, MANTENGA TODOS LOS PROTECTORES EN SU LUGAR Y ASEGURADOS MIENTRAS LA MAQUINA ESTE OPERANDO. LAS PIEZAS MOVILES INTERNAS PUEDEN CAUSAR LESIONES PERSONALES GRAVES.

15


ITEM	PART NO.	QTY.	DESCRIPTION
1	6500020	2	HAYBUSTER 3”
2	6500058	2	107 3”
2A	6500348		DECAL\LOGO\77\TANK
3	6500060	2	IMPORTANT Avoid Making Sharp Turns
4	6500016	1	Calibration Scale Grain
5	6500081	1	Calibration Scale Grass
6	6500022	1	Calibration Decal 7" Spacing
7	6500061	1	Seed Depth, Soil Penetration Ext.
8	6500062	1	IMPORTANT STORAGE
9	6500063	1	IMPORTANT Feed Wheel Shaft
10	6500101	1	WARNING No Riders
11	6500042	2	Keep Wheel Bolts Tight
12	6500064	1	Engage Locks
13	6500041	1	WARNING For Your Protection
14	6500040	1	WARNING Keep All Shields In Place
15	6500182	1	Ag Chemical Warning
16	6500163	1	WARNING Disc Blades
17	6500102	1	4 Red Stripe Decal\logo\stripe\red

LEGUME BOX DECALS

1	6500304	1	HAYBUSTER 1-3/4”
2	6500305	1	107 Decal 1-3/4
18	6500083	1	Chart 7" Spacing
17	6500102	6	1/2 Ft. Red Strips
	6500349		DECAL\LOGO\77\LEGUME
	7500077		12 Oz Yellow Spray Paint
	7500092		Quart Yellow Paint
	7500091		Gallon Yellow Paint
	7500078		12 Oz Red Spray Paint
	7500105		Quart Red Paint
	7500104		Gallon Red Paint

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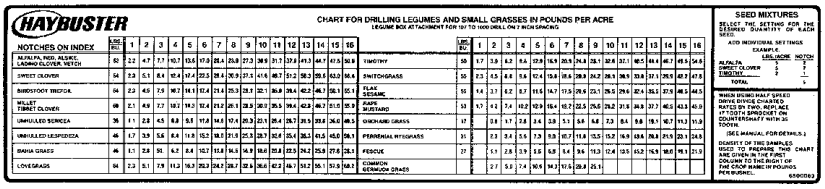
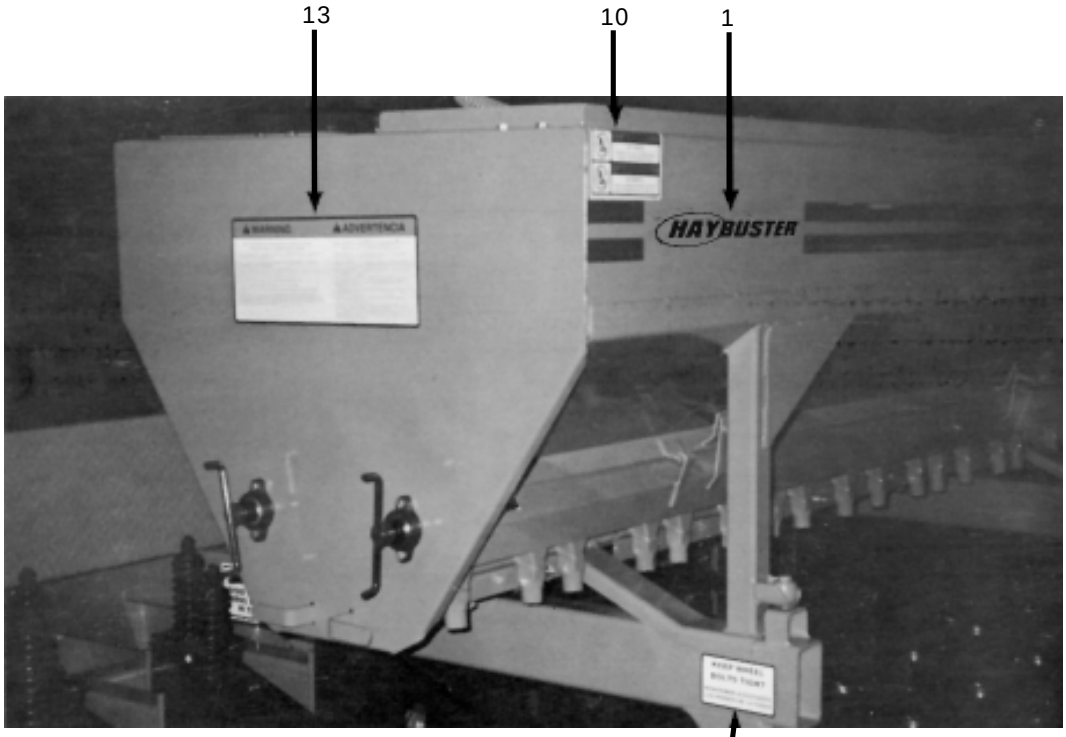
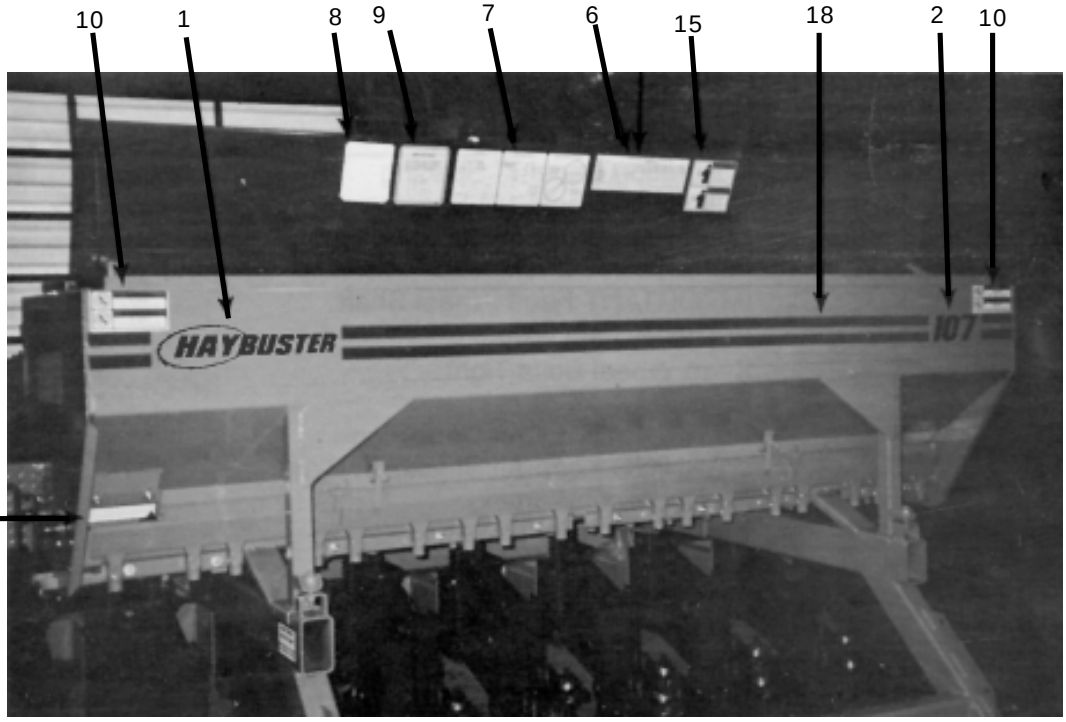
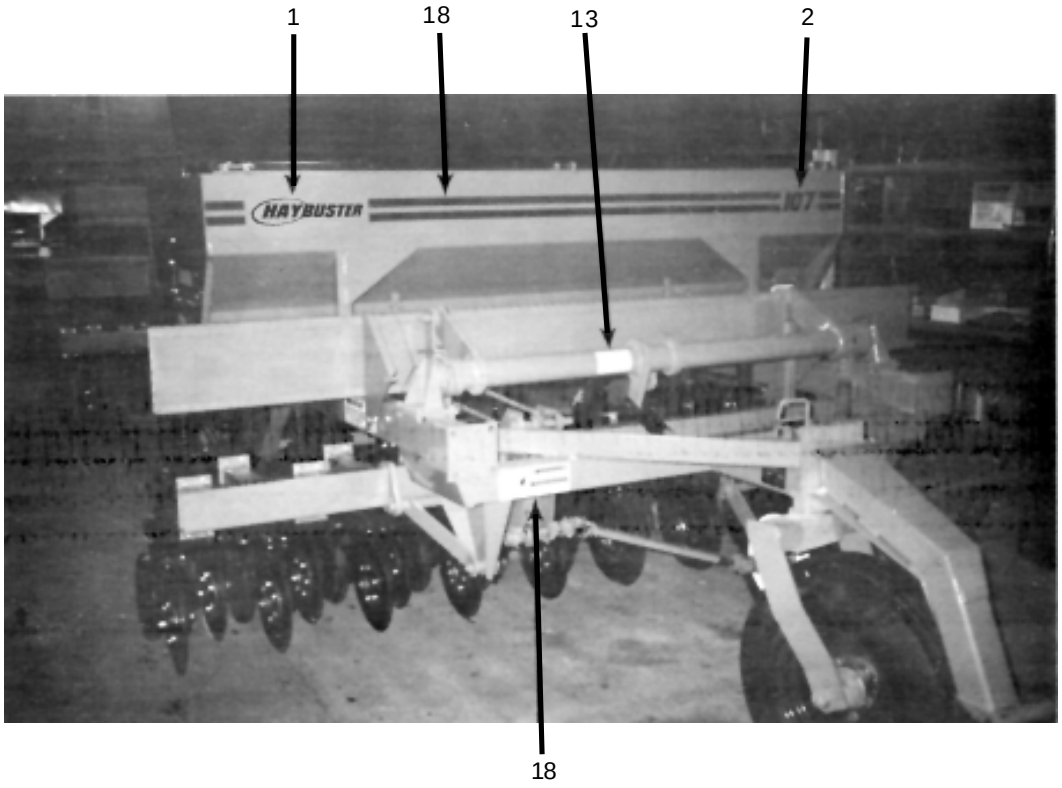
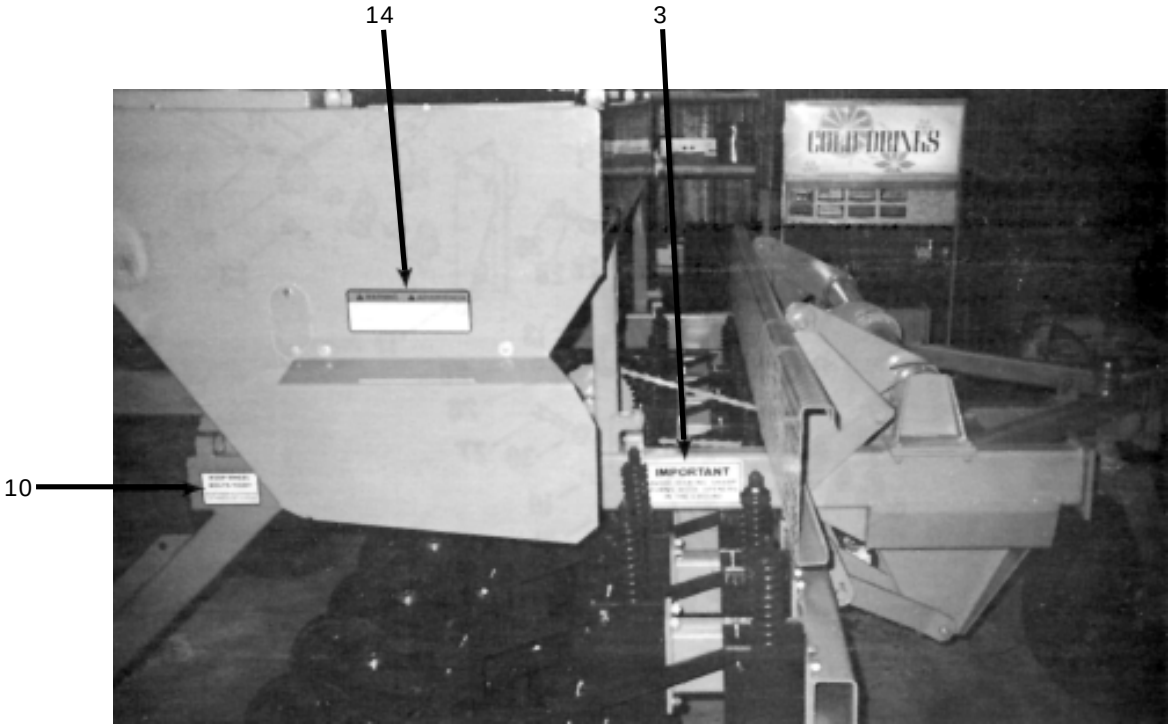




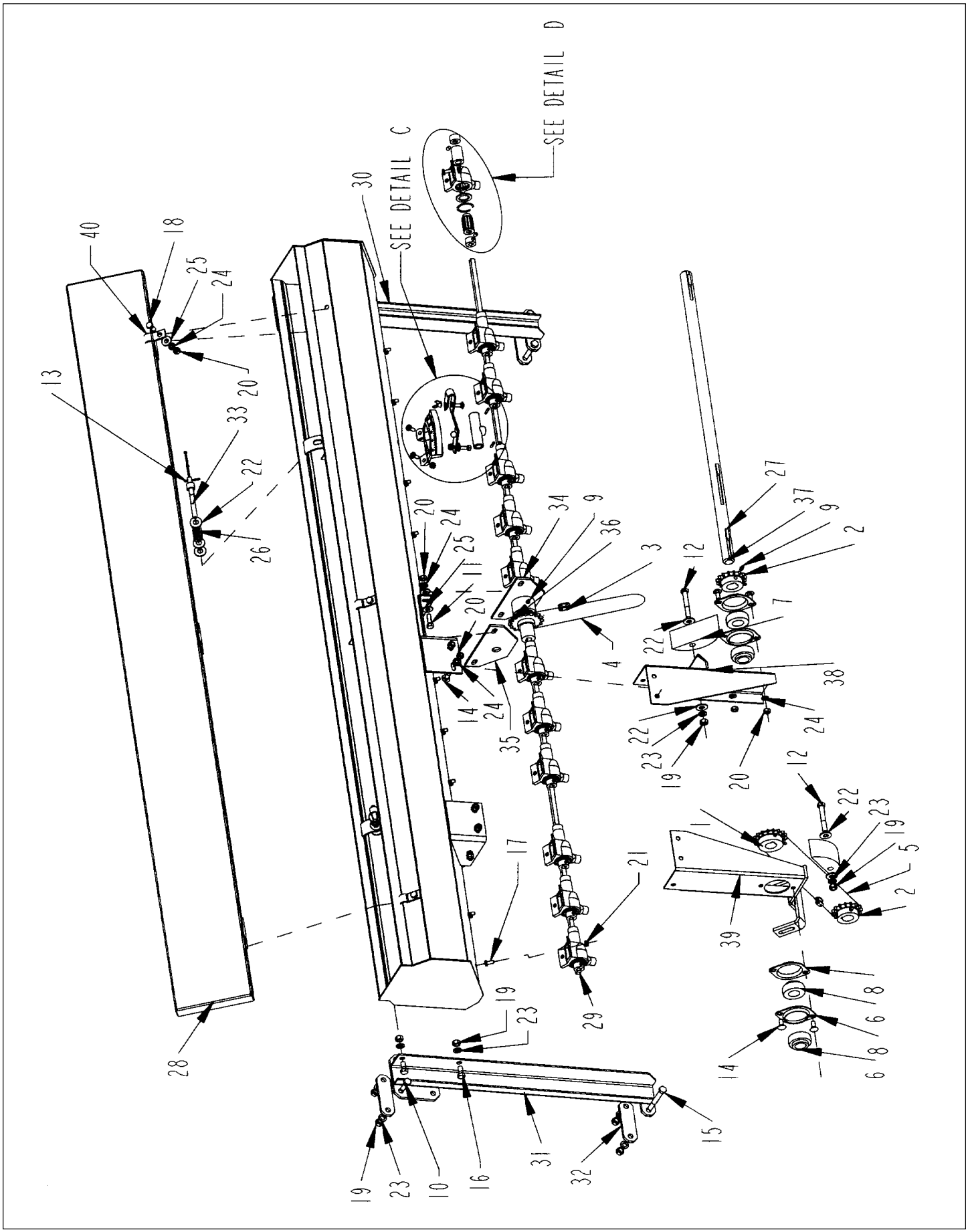


DECAL LOCATION (See pages 98-99 for descriptions)

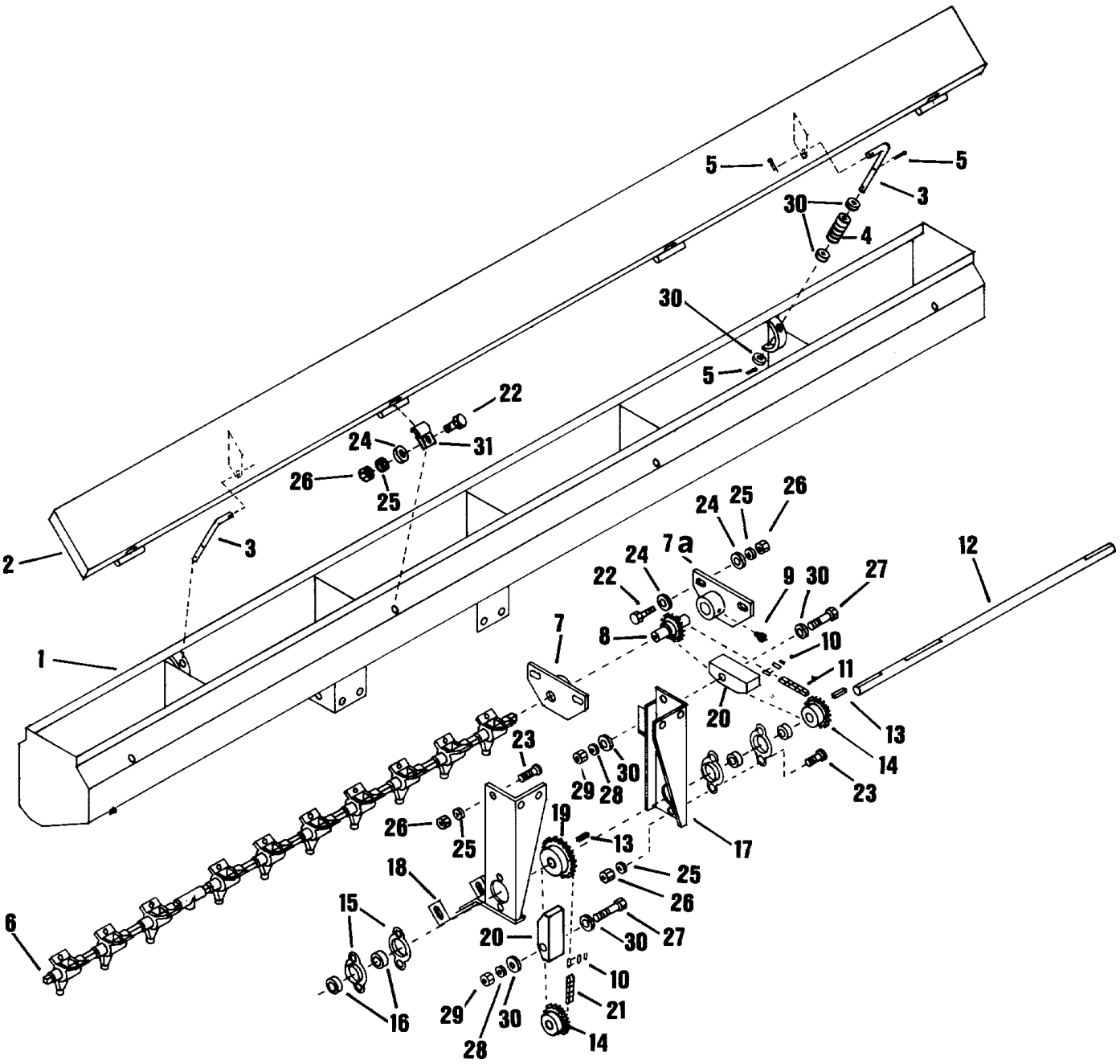




DECAL LOCATION (See pages 98-99 for descriptions)


SEE DETAIL D
SEE DETAIL C

ITEM	PART NO.	QTY.	DESCRIPTION
1	1000111	1	SPKT\40\B\17\1\1/4KW\SOFT
2	1000112	2	SPKT\40\B\15\1\1/4KW
3	1100224	2	40NP PITCH CONNECTOR LINK
4	1100232	1	53 LINKS 40NP PITCH CHAIN
5	1100233	1	77 LINKS 40NP PITCH CHAIN
6	2000002	4	1" BEARING W/ LOCK COLLAR
7	2000016	2	BLK\WOOD\IDLER
8	2000703	4	2 HOLE FLANGETTE
9	3800082	8	FTG\LUB\1/4NFXZERK\ADAPT
10	4800003	4	BOLT\HEX\3/8X1
11	4800013	4	BOLT\HEX\5/16X1
12	4800029	2	BOLT\HEX\3/8X2-1/2
13	4800127	6	PIN\COT\1/8X1
14	4800153	10	BOLT\CRG\5/16X3/4\NC
15	4800156	4	BOLT\HEX\3/8X3
16	4800164	4	BOLT\HEX\3/8X3/4
17	4800213	26	SCR\PAN\SLOT\1/4X5/8\NC
18	4800643	3	BOLT\HEX\5/16X3/4
19	4900002	14	NUT\HEX\3/8\NC
20	4900003	18	NUT\HEX\5/16\NC
21	4900040	27	NUT\FLG\SERR\1/4\NC
22	5000001	10	WASH\FLAT\3/8
23	5000019	14	WASH\LOCK\3/8
24	5000022	18	WASH\LOCK\5/16
25	5000023	12	WASH\FLAT\5/16
26	6100002	2	SPRING\COMP\.072W\11/16OD\2-1/8LONG
27	6200010	3	KEY\SQ\1/4X1
28	8400722	1	CVR\BOX\LEGUME
29	8400723	1	SHFT\3/8SQX71-1/2\LGUM;BX
30	8700001	1	BRKT\LEGUME\LH\LEG-BOX
31	8700002	1	BRKT\LEGUME\RH\LEG-BOX
32	8700003	4	BRKT\LEGUME\LH\LEG-BOX
33	8700006	2	ROD\SPG\COV\BOX
34	8700008	1	BRG\BOX\LEGUME\RH
35	8700009	1	BRG\BOX\LEGUME\LH
36	8700010	1	SPRKT\17T\LEG.BOX
37	8700011	1	SHFT\1X29\LEGUMEBOX
38	8700012	1	BRKT\LEGUME\LH\SHFT-BOX
39	8700013	1	BRKT\LEGUME\RH\SHFT-BOX
40	8700014	3	HINGE\LEGUMEBOX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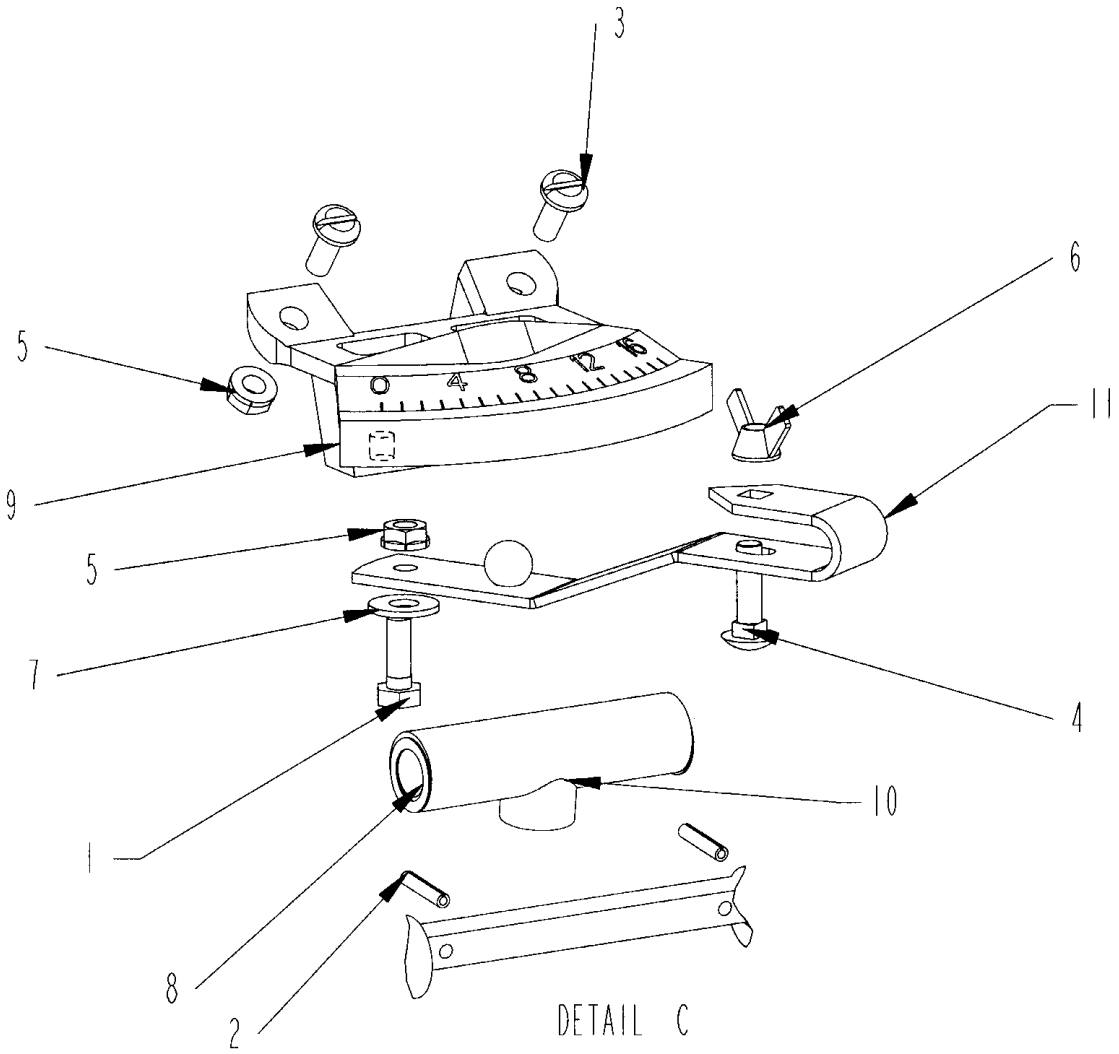
ITEM	PART NO.	QTY.	DESCRIPTION
1	8700004	1	Legume Box Weldment
2	8700005	1	Box Cover
3	8700006	2	Box Cover Spring Rod
4	6100046	2	Spring
5	4800127	6	Cotter Pin 1/8" x 1"
6	8700007	2	Shaft 3/8" Sq. x 50-3/4"
7	8700008	1	Bearing Right Hand
7A	8700009	1	Bearing Left Hand
8	8700010	1	Sprocket 17 Tooth
9	3800082	2	Zerk 1/4" Tapper
10	1100224	2	40NP Pitch Connector Link
11	1100232	1	53 Links 40NP Pitch Chain
12	8700011	1	Shaft 1" x 29"
13	6200010	4	1/4" x 1" Key
14	1000112	2	4015 Sprocket 1" Bore 1/4 KW
15	2000703	4	2 Hole Flangette
16	2000002	2	1" Bearing with Lock Collar
17	8700012	1	Bracket Left Hand
18	8700013	1	Bracket Right Hand
19	1000111	1	4017 Sprocket 1" Bore 1/4 KW
20	2000016	2	Wood Block Idler
21	1100233	1	77 Links 40NP Pitch Chain
22	4800013	8	5/16" x 1" Hex Head Bolt
23	4800153	10	5/16" x 3/4" Carriage Bolt
24	5000023	12	5/16" Flat Washer
25	5000022	18	5/16" Lock Washer
26	4900003	18	5/16" Hex Nut
27	4800029	2	3/8" x 2-1/2" Hex Head Bolt
28	5000019	2	3/8" Lock Washer
29	4900002	2	3/8" Hex Nut
30	5000001	10	3/8" Flat Washer
31	8700014	4	Hinge
32	8700015	2	Seed Cup Long Gang (Not Shown)
33	8700016	2	Seed Cup Short Gang (Not Shown)

SEED INDEX ASSEMBLY LEGUME BOX (DETAIL C)



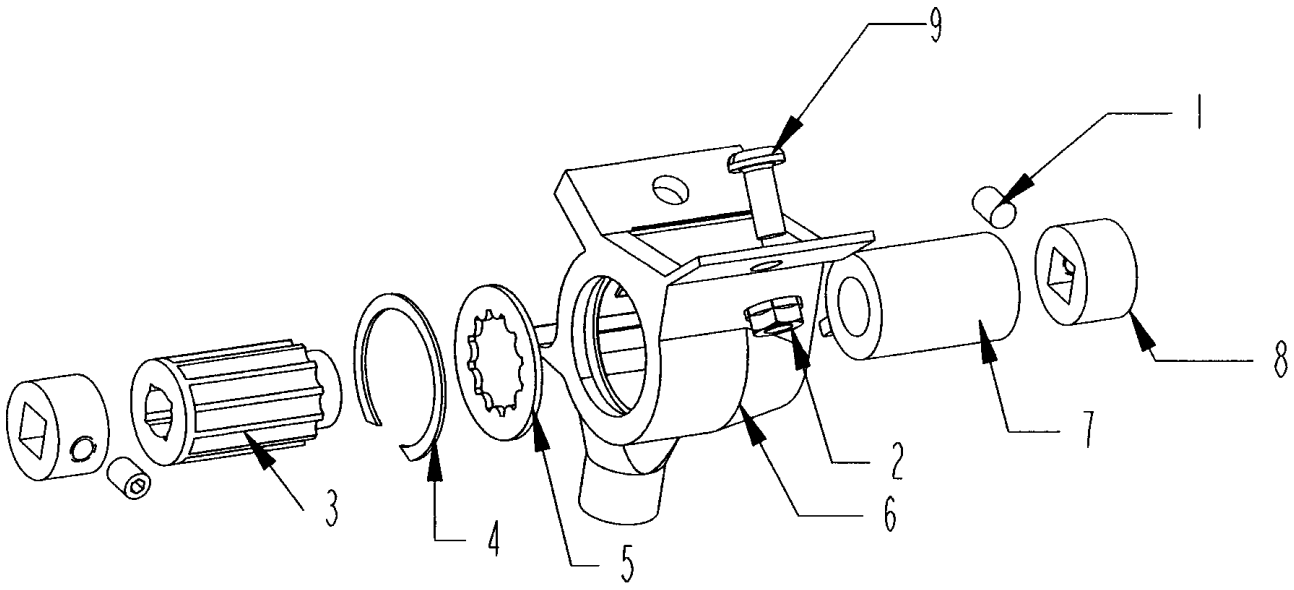
ITEM	PART NO.	QTY.	DESCRIPTION
1	4800024	1	BOLT\HEX\1/4X3/4
2	4800212	2	PIN\RLLD\5/32X3/4
3	4800213	2	SCR\PAN\SLOT\1/4X5/8\NC
4	4800214	1	BOLT\CRG\1/4X1\NC
5	4900040	2	NUT\FLG\SERR\1/4\NC
6	4900041	1	NUT\WING\1/4\NC
7	5000035	1	WASH\FLAT\1/4
8	5000118	2	WASH\FLAT\SPCL\14MMX.5MMX20MMO.D.
9	7500183	1	METER\INDEX\SEED
10	7500184	1	SHFTR\INDEX\SEED
11	7500185	1	ARM\SHFTR\INDEX\SEED

NOT SHOWN

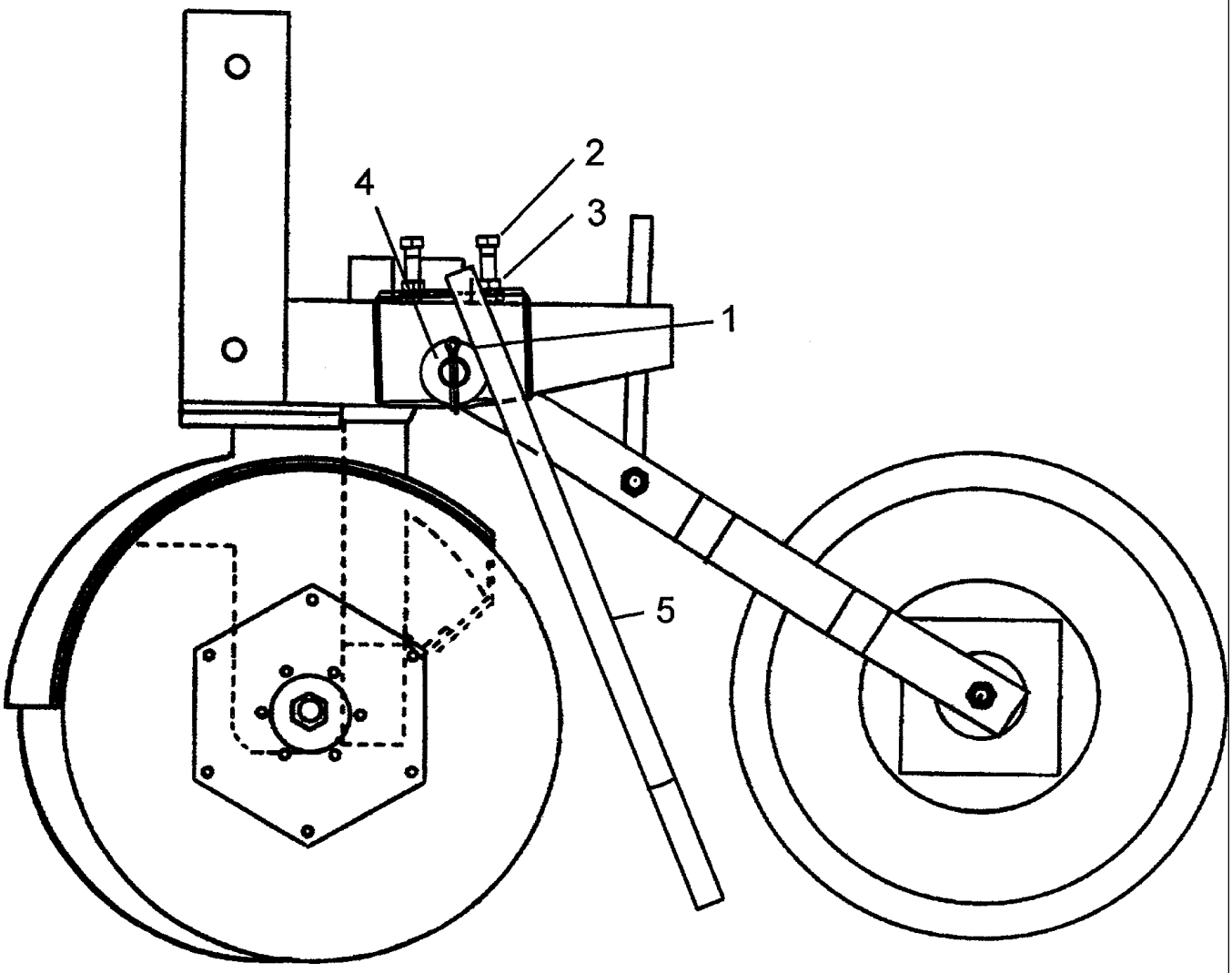
6500016	DECAL\INFO\CAL;SCALE;GRAIN
6500017	DECAL\INFO\CAL.SCALE;FERT
6500081	DECAL\INFO\CAL.SCALE;GRASS

CUP ASSEMBLY LEGUME BOX (DETAIL D)

ITEM	PART NO.	QTY.	DESCRIPTION
1	4800211	24	SCR\SET\ALN\1/4X5/16\NC
2	4900040	24	NUT\FLG\SERR\1/4\NC
3	7500177	12	ROLLER\FEED
4	7500178	12	RING\SNAP
5	7500179	12	WASHER\ROLLER\FEED
6	7500180	12	FEED CUP ASSEMBLY
7	7500181	12	GATE\CUP\ASSY
8	7500182	24	CLLR\7/80D3/8SQ
9	4800213	24	SCR\PAN\SLOT\1/4X5/8\NC
	NOT SHOWN		
	3700129		HOSE\PVC\5/8IDX22-1/2\CLR



DETAIL D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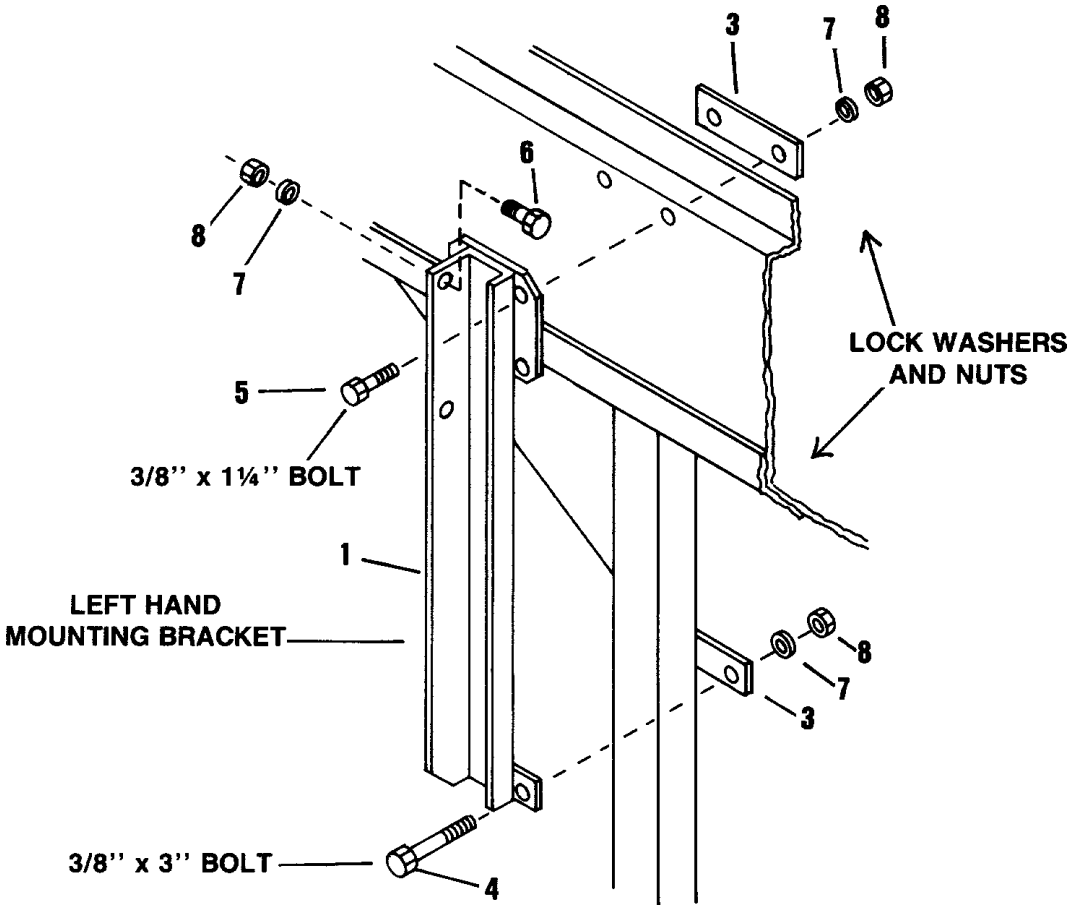
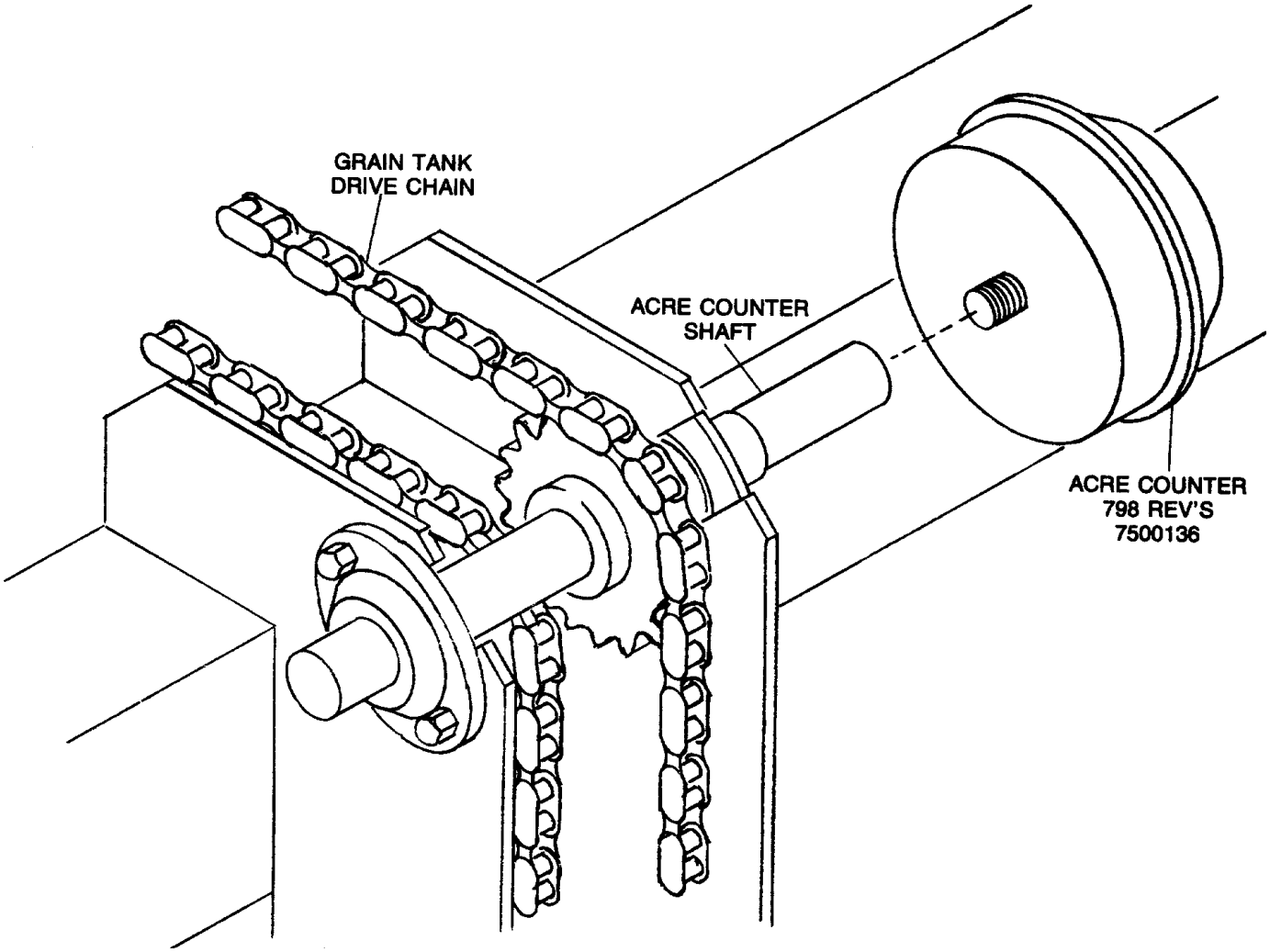
ITEM	PART NO.	QTY.	DESCRIPTION
	8400631		TUBE\DROP\LEGUME\KIT\1BEND\107\PER ROW
1	4800050		PIN\COT\3/16 X 1-1/2
1A	4800218	1	BOLT\HEX\5/8X5-1/2
1B	4900107	1	NUT\NYLCK\5/8\NC
2	4800098	2	BOLT\HEX3/8 X 1-1/4\NC
3	4900026	2	NUT\JAM\3/8\NC
4	5000002	1	WASH\FLAT\5/8
5	8400630	1	BRKT\TUBE\DROP\LEGUME\1BEND\107
NOT SHOWN			
	3700127	2 ft.	HOSE\PVC\5/8ID\CLEAR\BULK



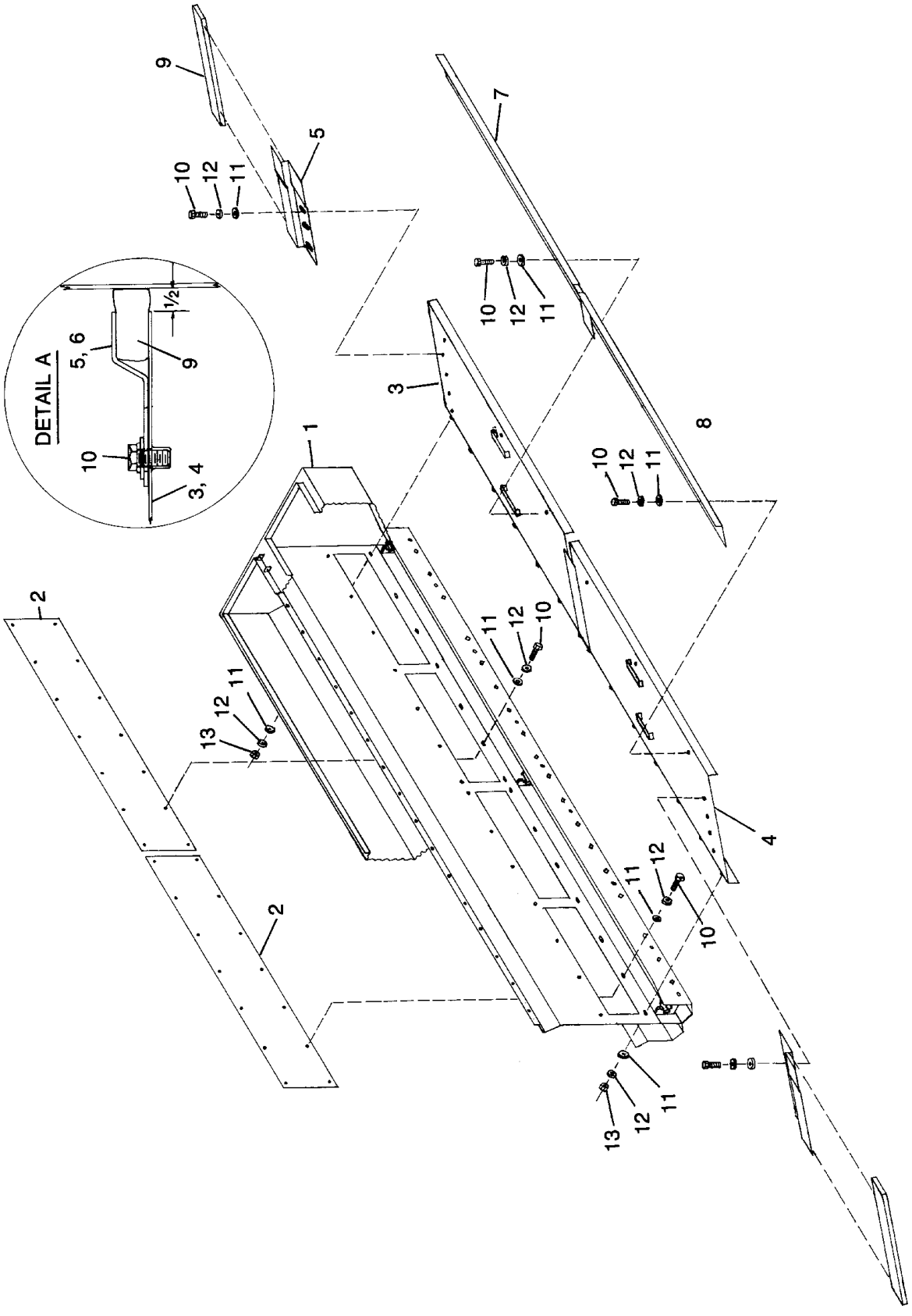
ITEM	PART NO.	QTY.	DESCRIPTION
1	8700001	1	Mounting Bracket Left Hand
2	8700002	1	Mounting Bracket Right Hand (Not Shown)
3	8700003	4	Strap
4	4800156	4	3/8" x 3" Hex Head Bolt
5	4800098	4	3/8" x 1-1/4" Hex Head Bolt
6	4800003	4	3/8" x 1" Hex Head Bolt
7	5000019	12	3/8" Lock Washer
8	4900002	12	3/8" Hex Nut



Installation:

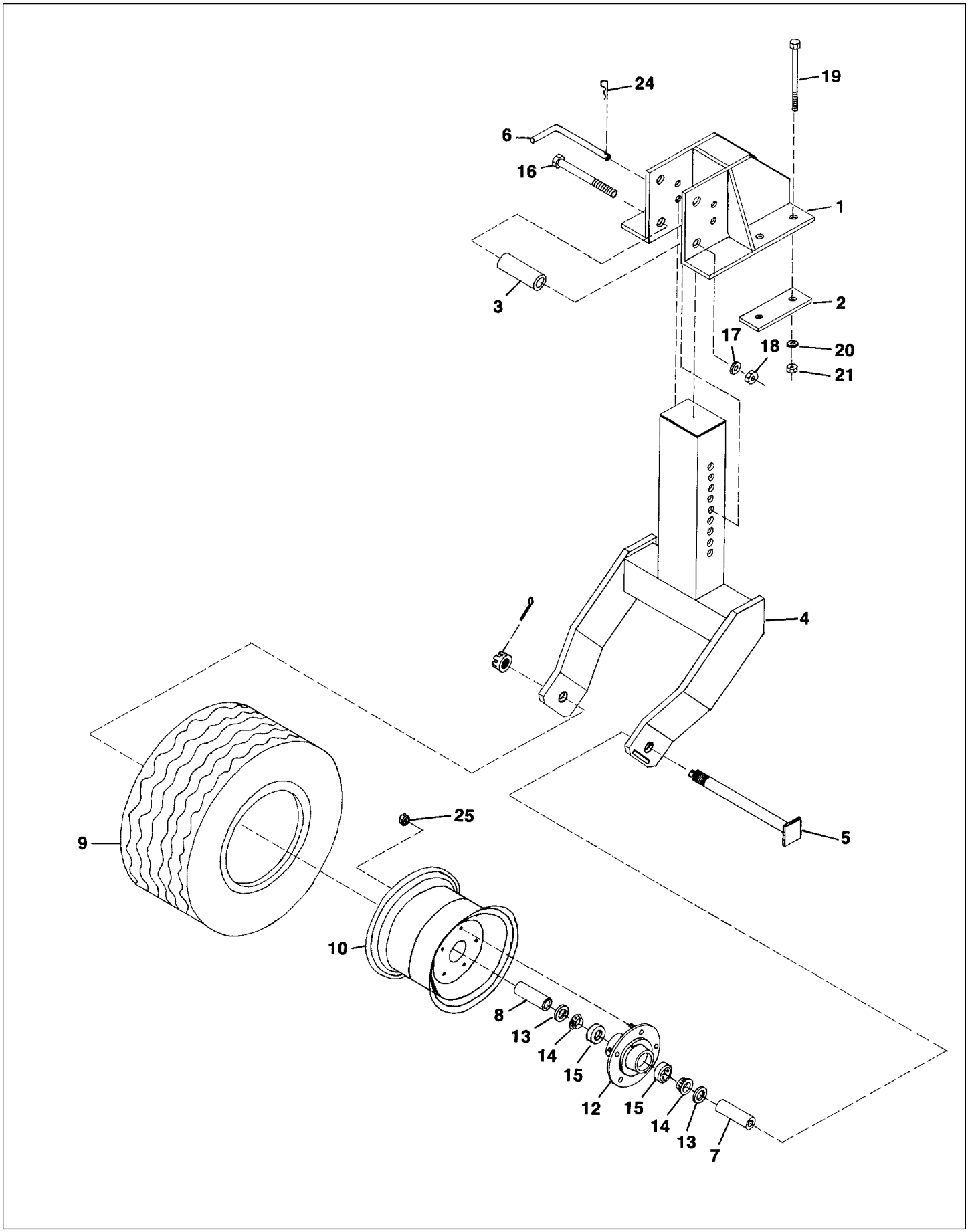
1. Turn acre counter into threaded hole in end of acre counter shaft (see Illustration).

FALSE BOTTOM OPTION (107 ONLY)



FALSE BOTTOM OPTION (107 ONLY)

ITEM	PART NO.	QTY.	DESCRIPTION
1	8400244	1	Tank Weldment - 107
2	8400318	2	Divider Cover - 107
3	8400319	1	False Bottom RH - 107
4	8400320	1	False Bottom LH - 107
5	8400321	1	Side Seal Retainer RH - 107
6	8400322	1	Side Seal Retainer LH - 107
7	8400323	1	Upper Seal RH - 107
8	8400324	1	Upper Seal LH - 107
9	7500308	2	Rubber Seal
10	4800164	40	3/8" x 3/4" Hex Bolt
11	5000001	54	3/8" Flat Washer
12	5000019	54	3/8" Lock Washer
13	4900002	14	3/8" Hex Nut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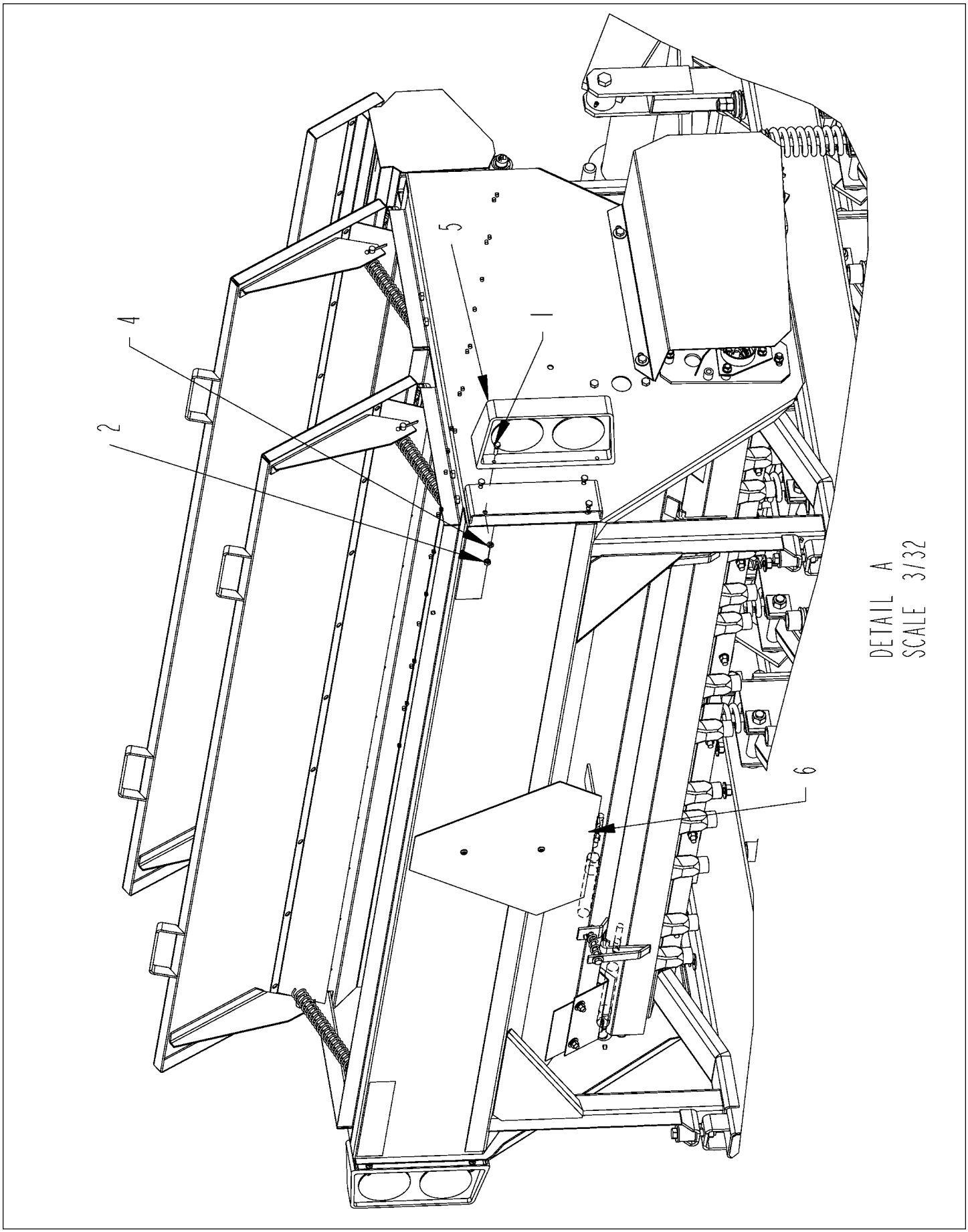
ITEM	PART NO.	QTY.	DESCRIPTION
1	8400332	2	Gauge Wheel Mount Frame
2	8400333	4	Gauge Wheel Mount Strap
3	8400334	4	Bolt Sleeve
4	8400335	2	Wheel Folk
5	8400336	2	Spindle
6	8400337	2	Adjustment Handle
7	8400338	2	Short Spacer
8	8400339	2	Long Spacer
9 & 10	2600813		Tire & Rim Assembly
9	2600026	2	Tire 20.5 x 8.0 x 10
10	2600631	2	Wheel 10" - 5 Bolt
11	2900107	2	Hub (Complete Assembly) CMPT 5 Bolt
12	2900108	2	Hub CMPT 5 Bolt
13	2900031	4	Seal/Wheel Hub (R407)
14	2900032	4	Cone/Wheel Hub (44643)
15	2900033	4	Cup/Wheel Hub (44610)
16	4800248	4	3/4" x 6" Hex Bolt
17	5000012	4	3/4" Lock Washer
18	4900004	4	3/4" Nut
19	4800144	8	5/8" x 6-1/2" Hex Bolt
20	5000003	8	5/8" Lock Washer
21	4900005	8	5/8" Nut
22	4800157	2	3/16" x 2" Cotter Pin
23	4900055	2	1" Castle Nut
24	4800107	2	1/8" Hair Pin
25	2500710	10	1/2" - 2 60° Cone Wheel Nut
26	8400348		Gauge Wheel Kit Complete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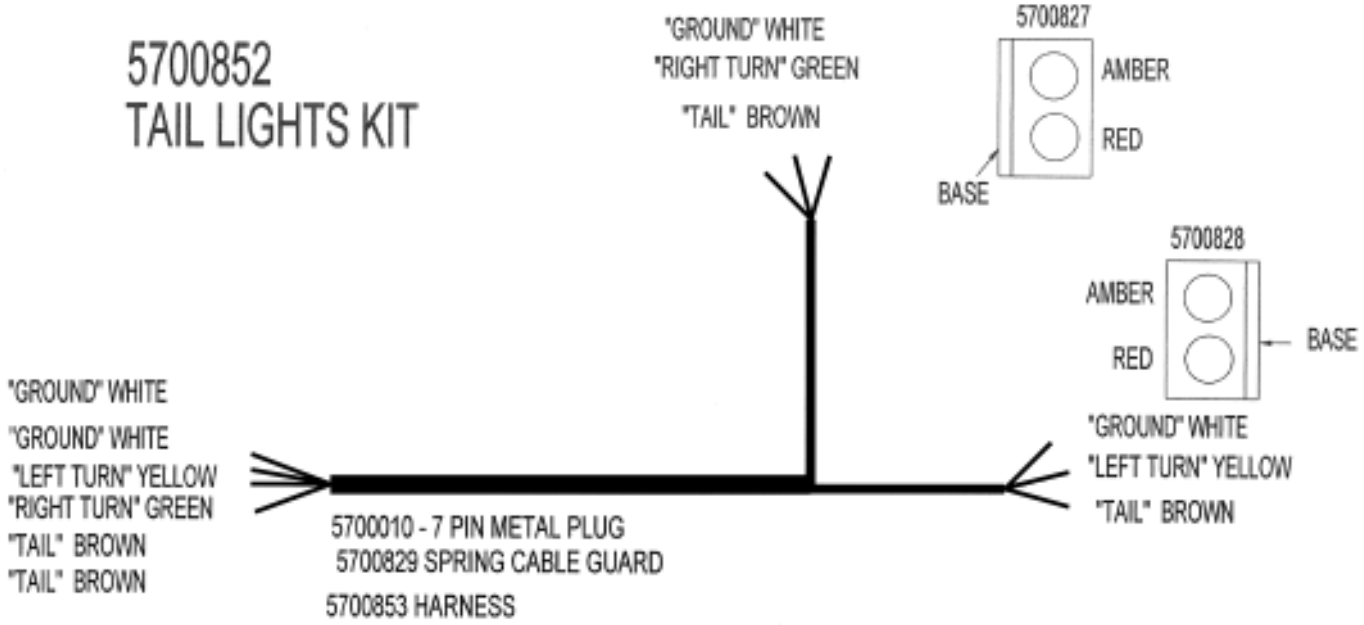
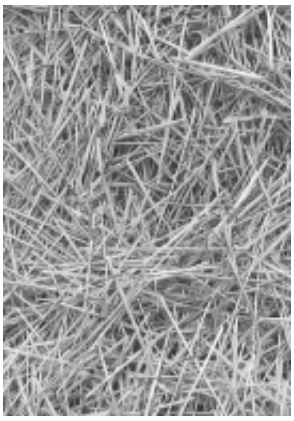
DETAIL A
SCALE 3/32

ITEM	PART NO.	QTY.	DESCRIPTION
1	4800277	8	BOLT\HEX\1/4X1
2	4900009	8	NUT\HEX\1/4\NC
4	5000024	8	WASH\LOCK\1/4
5	5700852	2	KIT\LIGHT\2-LIGHTS\107\77
6	7501353	1	SIGN\SMV\PLSTC-BCKNG
	NOT SHOWN		
	7500590		ENCL\OPS\8-1/2X11X1-5/8\>




HAYBUSTER®
A Tradition of Innovation Since 1966

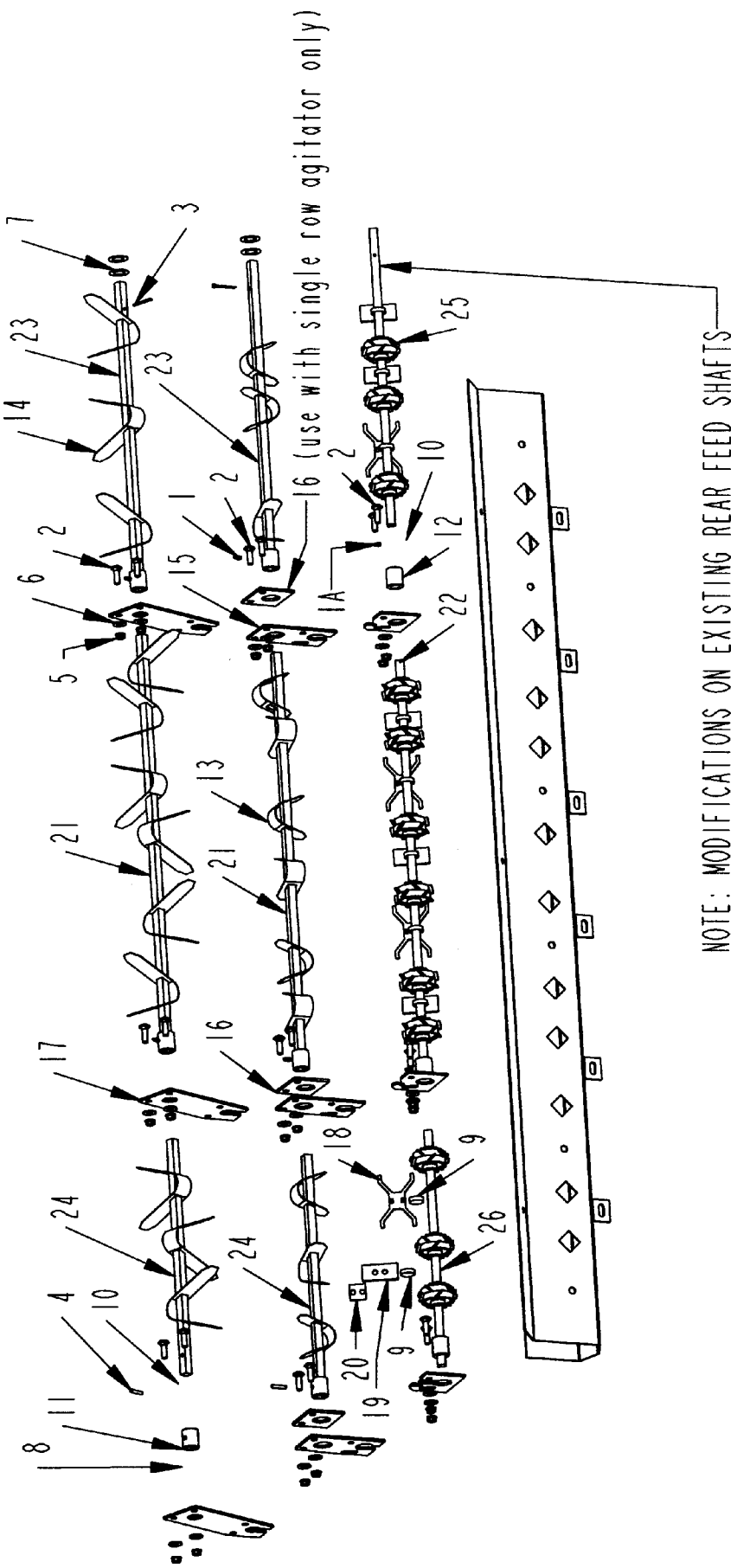


77/107 DRILL

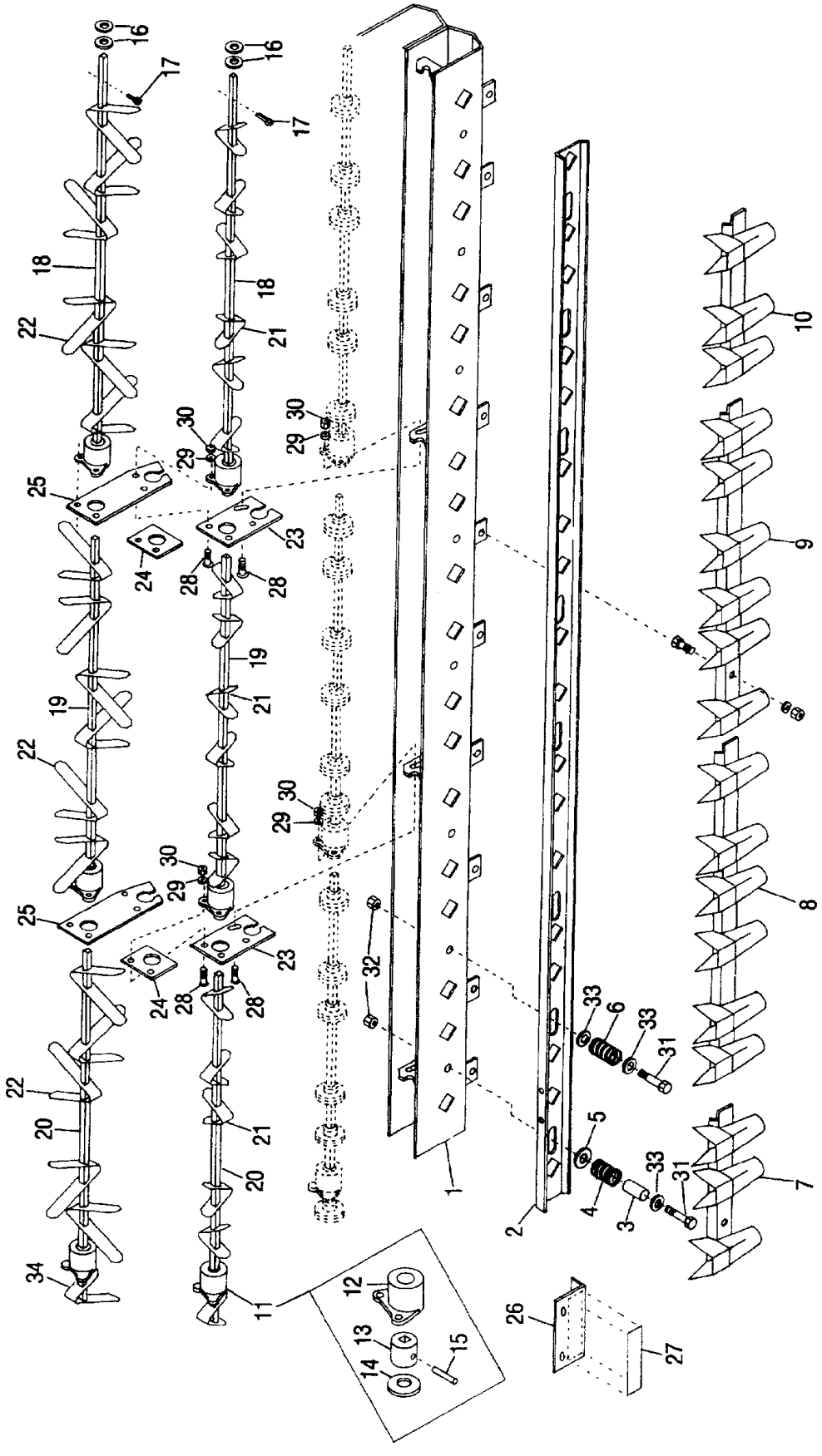
107 DRILL - S.N. CJ 4427 & UP

77 DRILL - S.N. CJ 50177 & UP

NATIVE GRASS KIT
Parts Reference & Installation Instructions


16 (use with single row agitator only)
NOTE: MODIFICATIONS ON EXISTING REAR FEED SHAFTS

ITEM	PART	QUANTITY SINGLE AGITATOR	QUANTITY DUAL AGITATOR	DESCRIPTION
1	3800082	2	4	FTG\LUB\1/4NFXZERK\ADAPT
1A	3800098	3	3	FTG\LUB\1/4MPXZRK\45D
2	4800012	12	18	BOLT\CRG\3/8X1-1/4\NC
3	4800044	1	2	PIN\COT\5/32X1-1/2
4	4800169	1	2	PIN\RLLD\1/4X1-1/8
5	4900076	12	18	NUT\FLG\SERR\3/8\NC
6	5000001	12	18	WASH\FLAT\3/8
7	5000027	2	4	WASH\7/8DX1-1/2OD\20GA SHIM
8	5000055	3	6	WASH\SPINDLE\7/8
9	7500107	11	11	CLMP\HOSE
10	7500108	3	6	HSG\CAST\BUSH\TANK\DRILL
11	7500109	1	2	SLV\SQ_HL\5/8X1-7/16\W/5/16_THRU_HL
12	7500562	2	4	SLV\SQ_HL\5/8X1-7/16\W/5/16_PLAIN
13	8400256	12	12	SMALL AGITATOR PADDLE 7" SPACING
14	8400257	0	12	LARGE AGITATOR PADDLE 7" SPACING
15	8400259	2	2	BRKT\MNT\GRASS TUBE
16	8400260	3	0	BEARING SPACER PLATE
17	8400261	0	2	BRKT\MNT\GRASS TUBE
18	8400267	4	4	FNGR\AGTTR\DRILL
19	8400396	6	6	RUBBER PADDLE
20	8400397	6	6	PADDLE, REINFORCE PLATE
21	8400423	1	2	SHFT\TANK\33-1/16\DRILL
22	8400659	EXISTING SHAFT		WHL\FEED\33-1/16\REAR\CTR
23	8400708	1	2	SHFT\TANK\23-15/16\DRILL
24	8400710	1	2	SHFT\TANK\19"\DRILL
25	8400711	EXISTING SHAFT		WHL\FEED\23-15/16\REAR\RH
26	8400713	EXISTING SHAFT		WHL\FEED\19\REAR\LH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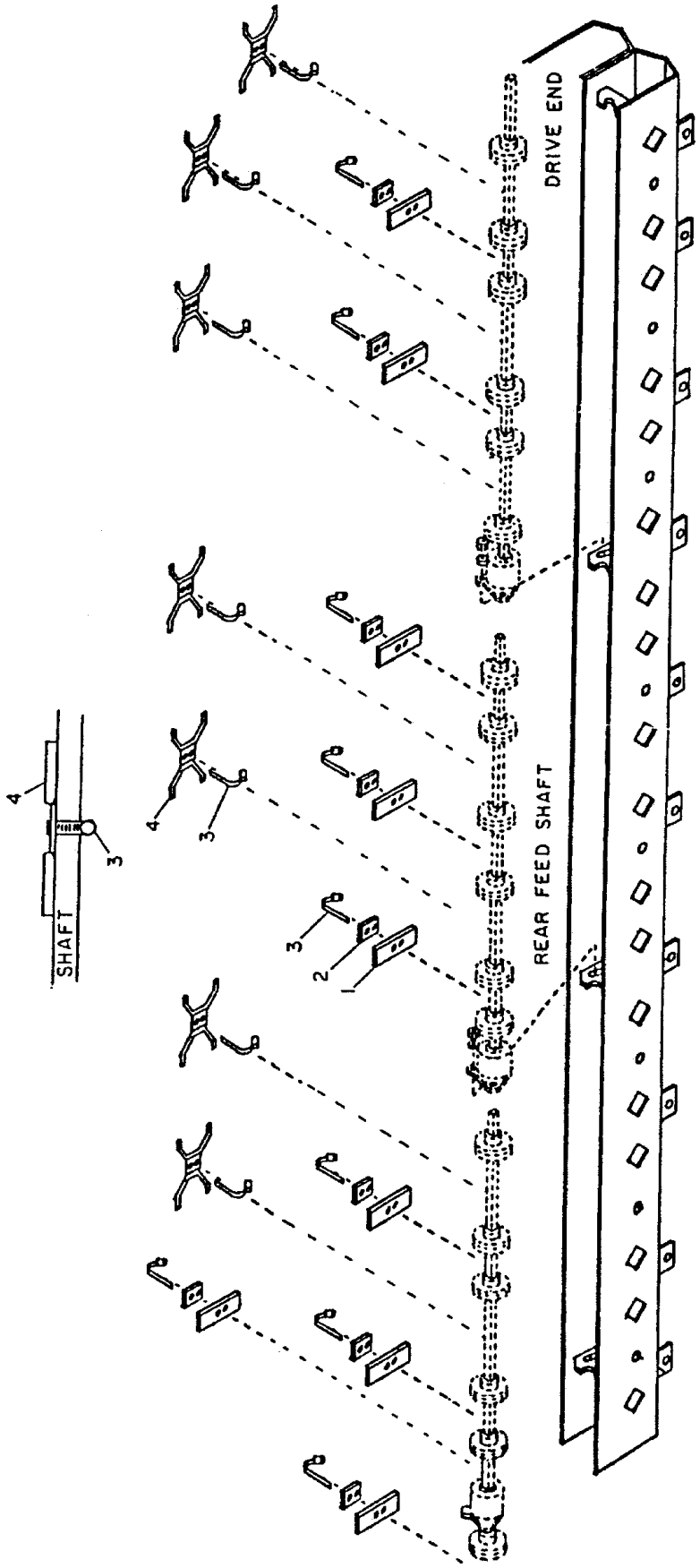
ITEM	PART	QUANTITY SINGLE AGITATOR	QUANTITY DUAL AGITATOR	DESCRIPTION1
	NOT IN KIT			GRAIN TANK
2	8400245	1	1	CONTROL PLATE 7” SPACING
2	8400247	1	1	CONTROL PLATE 10” SPACING
3	8400007	3	3	CONTROL PLATE GUIDE
4	6100031	3	3	SPRING\COMP\.072W\25/32OD\2-1/8
5	5000002	3	3	WASH\FLAT\5/8
6	6100002	5	5	SPRING\COMP\.072W\11/16OD\2-1/8
7	8400248	1	1	SEED CUP LEFT END SEC 7”
7	8400252	1	1	SEED CUP LEFT END SEC 10”
8	8400249	1	1	SEED CUP LEFT CEN SEC 7”
8	8400253	1	1	SEED CUP LEFT CEN SEC 10”
9	8400250	1	1	SEED CUP RIGHT CEN SEC 7”
9	8400254	1	1	SEED CUP RIGHT CEN SEC 10”
10	8400251	1	1	SEED CUP RIGHT END SEC 7”
10	8400255	1	1	SEED CUP RIGHT END SEC 10”
11	7500110	3	6	BRKT\CAST\W/BEARING/COMPLETE
12	7500108	3	6	CAST BRACKET HOUSING
13	7500109	3	6	1.445 5/8SQ HOLE SLEEVE
14	5000036	3	6	WASH\1-3/4ODX.89ID\1-1/4
15	4800169	1	2	PIN\RLLD\1/4X1-1/8
16	5000027	2	4	WASH\7/81DX1-1/2OD\20GA SHIM
17	4800044	1	2	PIN\COT\5/32X1-1/2
18	8400426	1	2	38-7/16 FEED SHAFT 100 SERIES
19	8400423	1	2	33-1/16 FEED SHAFT 100 SERIES
20	8400425	1	2	34-1/2 FEED SHAFT 100 SERIES
21	8400256	18	18	SMALL AGITATOR PADDLE 7” SPACING
21	8400256	12	12	SMALL AGITATOR PADDLE 10” SPACING
22	8400257		17	LARGE AGITATOR PADDLE 7” SPACING
22	8400257		11	LARGE AGITATOR PADDLE 10” SPACING
23	8400259	3	3	LOWER BEARING BRACKET
24	8400260	3		BEARING SPACER PLATE
25	8400261		3	UPPER BEARING BRACKET
26	8400262	1	1	SCALE PLATE
27	6500081	1	1	DECAL\INFO\CAL.SCALE\GRASS\107BOX
28	4800012	12	18	BOLT\CRG\3/8X1-1/4NC
29	5000001	12	18	WASH\FLAT\3/8
30	4900076	12	18	NUT\FLANGE\SERR\3/8\NC
31	4800082	8	8	BOLT\HEX\1/2X1-1/2
32	4900014	8	8	NUT\TPLCK\1/2/NC
33	5000016	13	13	WASH\FLAT\7/16
34	8400258		1	LARGE AGITATOR PADDLE, W/1 SHORT LEG
	8400580			ATTACH\NTV-GRASS\KIT\107\7"\DEALER_INSTALLED
	8400636			ATTACH\NTV-GRASS\ASSY\107\7"\FACTORY_INSTALLED


DRIVE END
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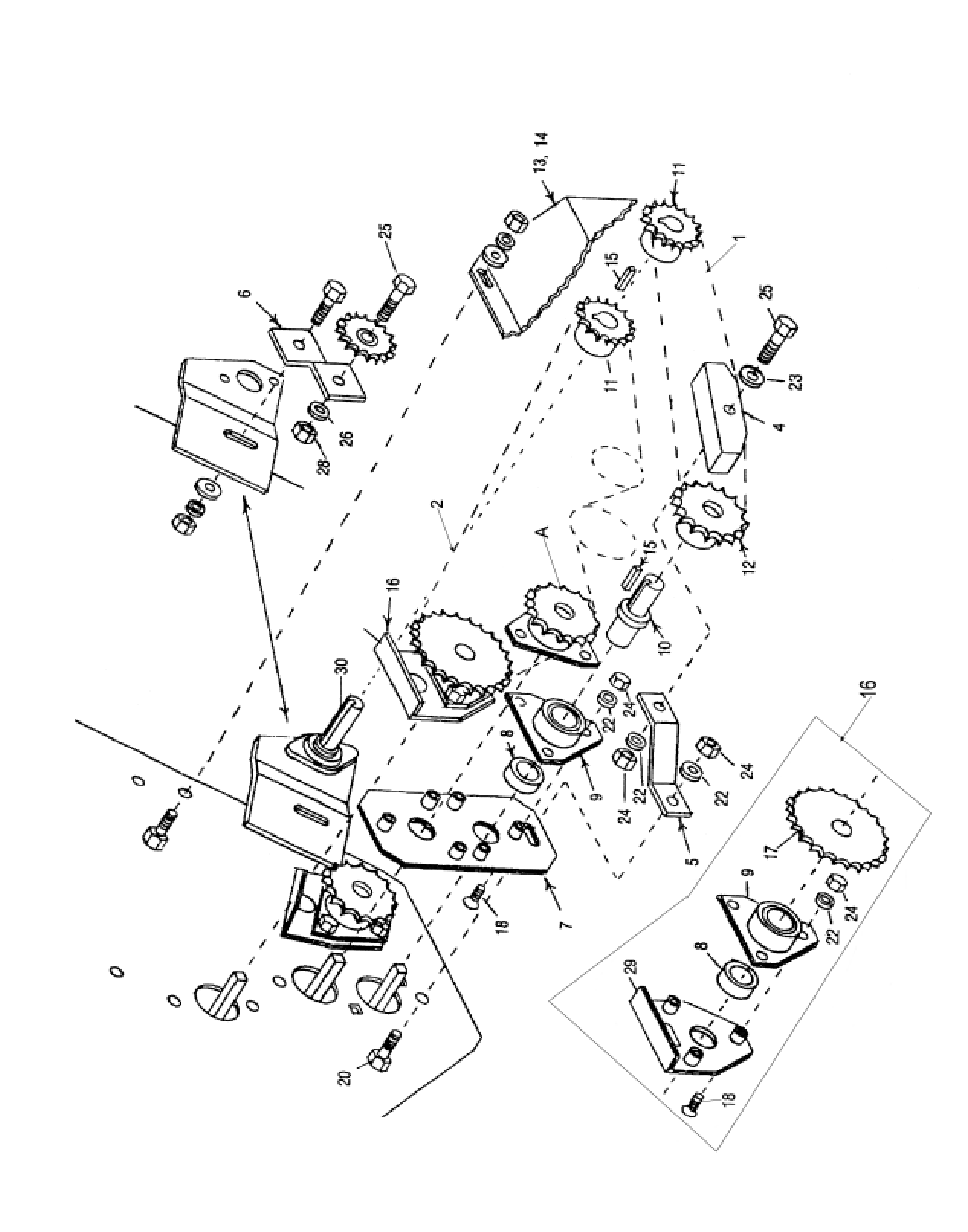
ITEM	PART NO.	QTY.	DESCRIPTION
1	8400396	9	RUBBER PADDLE
2	8400397	9	PADDLE, REINFORCE P,LATE
3	7500107	16	CLAMP\HOSE\1-1/4\WORM\SS
4	8400267	7	FEED WHEEL SHAFT AGITATOR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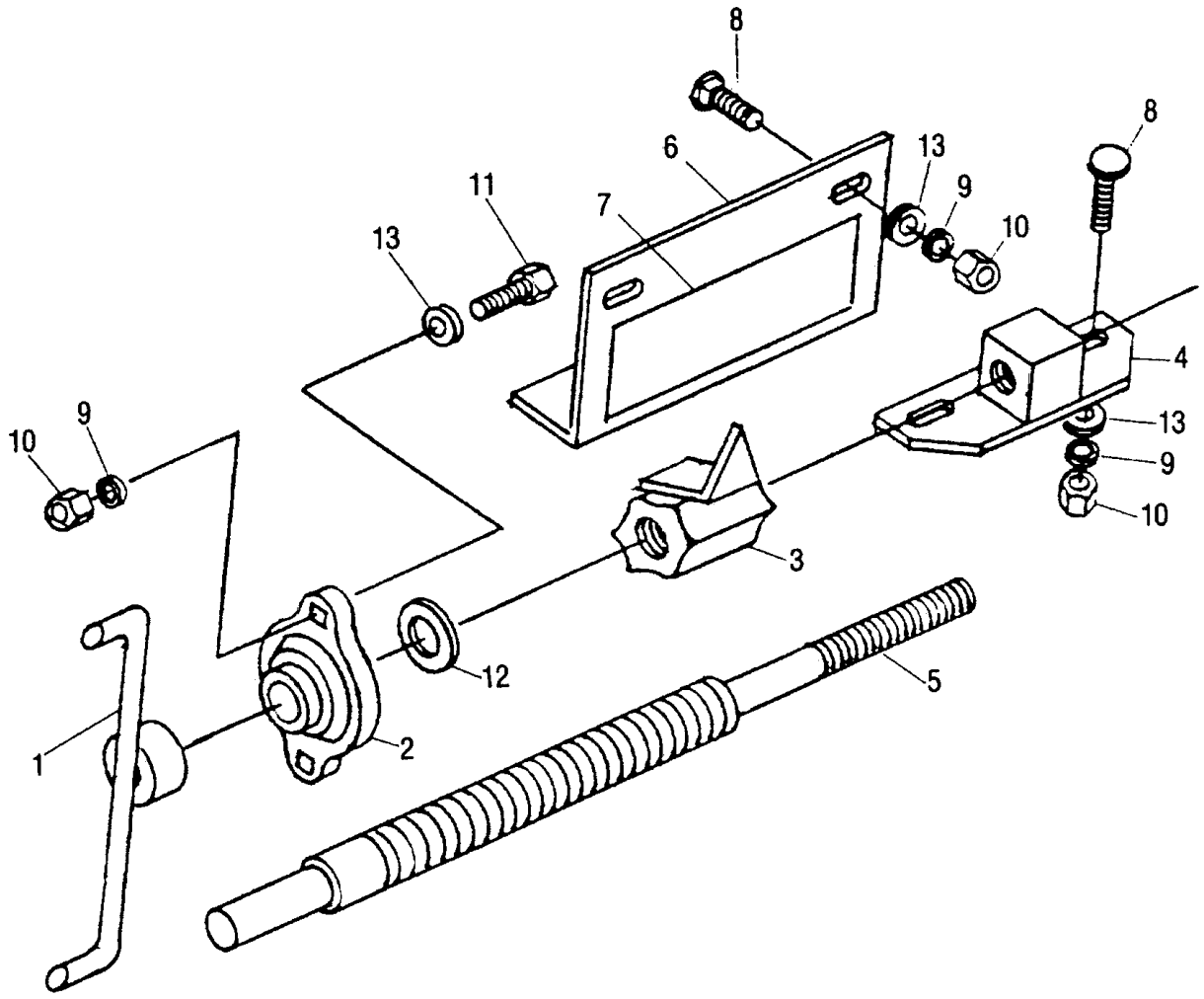
ITEM	PART	QUANTITY SINGLE AGITATOR	QUANTITY DUAL AGITATOR	DESCRIPTION
1	1100282	1		CHAIN\50NP\69
2	1100237		1	CHAIN\50NP\95
3	1100227	1	1	CHAIN\50NP\CL
4	2000016	1	1	BLOCK\WOOD\IDLER
5	8400240	1	1	WOOD BLOCK IDLER MOUNT
6	8400241	1	1	MNT\SPKT\IDLER
7	8400242	1	1	TANK SEALER PLATE
8	2000802	2	3	CLLR\ECC\1-1/4
9	8400070	2	3	BRACKET W/BEARING
10	8400438	1	1	DRIVE SHAFT STUB(GRASS)
11	1000029	2	2	SPKT\50\B\14\1\1/4KW\HRN
12	1000175	1	1	SPKT\50\B\18\1\1/4KW
13	8400243	1		SHLD\AGTTR\SINGLE
14	8400246		1	SHLD\AGTTR\DOUBLE
15	6200014	2	2	KEY\SQ\1/4X1-1/4
16	8400239		1	SEALER PLATE & BRG COMPLETE
17	8400238		1	50-24 SPRKT W/SQ HOLE SLEEVE
18	4800167	6	9	SCR\CAP\ALN\3/8X1-1/4\NC
19	4800034	1	2	BOLT\HEX\3/8X1-1/2
20	4800003	1	2	BOLT\HEX\3/8X1
21	4800029	1	1	BOLT\HEX\3/8X2-1/2
22	5000019	11	16	WASH\LOCK\3/8
23	5000001	6	7	WASH\FLAT\3/8
24	4900002	11	16	NUT\HEX\3/8\NC
25	4800514	2	2	BOLT\HEX\3/8X2-3/4
29	8400074		1	SEALER PLATE
30	8400440			SHFT\1X36(STANDARD)
30	8400573			SHAFT\RD\TANK\1X38*
30	8400738			SHAFT\RD\TINTV_GR\1X23.5**
30	8400718			SHFT\1X21.5(STANDARD)

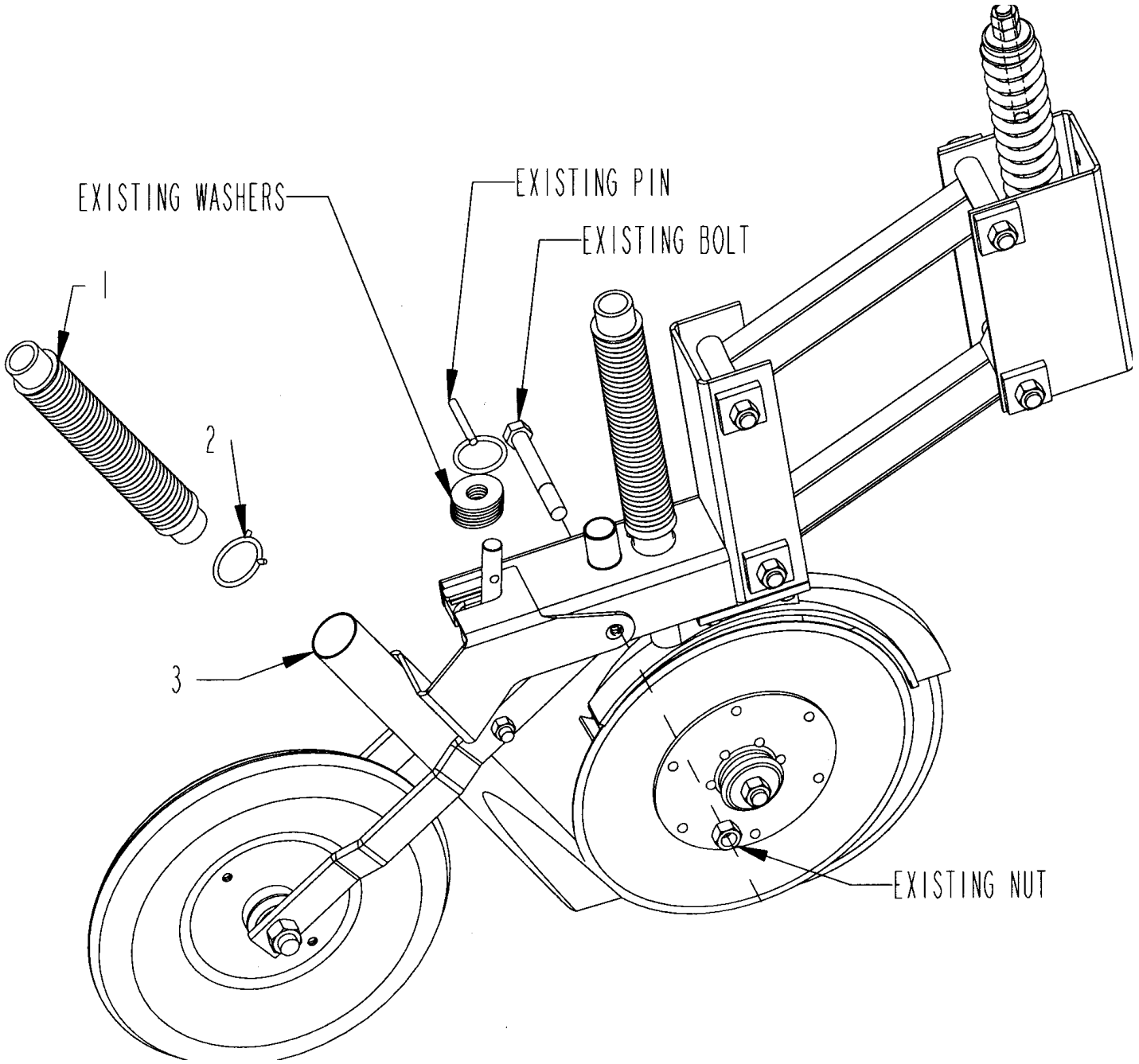
NOTE (*): REQUIRED WHEN THE NATIVE GRASS KIT AND A LEGUME BOX ARE MOUNTED ON THE SAME 107

NOTE (**): REQUIRED WHEN THE NATIVE GRASS KIT AND A LEGUME BOX ARE MOUNTED ON THE SAME 77



ITEM	PART NO.	QTY.	DESCRIPTION
1	8400060	2	CALIBRATION HANDLE
2	2000313	4	BRG\FLG\CAST\3/4\2 BOLT
3	7500071	2	CALIBRATION POINTER NUT
4	7500072	2	CALIBRATION CONTROL PL NUT
5	7500073	2	CALIBRATION SHAFT #6620
6	8400262	2	CALIBRATION SCALE PLATE
7	6500081	1	DECAL\INFO\CAL.SCALE\GRASS\107BOX
8	4800393	8	BOLT\HEX\5/16X7/8\GR8
9	5000022	12	WASH\LOCK\5/16
10	4900003	12	NUT\HEX\5/16\NC
11	4800013	4	BOLT\HEX\5/16X1
12	5000039	2	WASH\1-1/4ODX13/16IDX.110
13	5000023	12	WASH\FALT\5/16

ITEM	PART NO.	QTY.	DESCRIPTION
1	7500168	1	CONVOLUTED HOSE
2	7500169	1	CLAMP\SDHOSE\2\CP-34
3	8400690	1	TUBE\DROP\OVERSIZED



77 Native Grass Kit Field Installation For single and double agitators

An agitator kit may be necessary when seeding grasses that will not flow freely into the feed wheels after removing feed wheel covers. The following steps and illustrations will enable you to install the agitator kit in the rear compartment of an existing Haybuster 77 drill box.

Step 1. Remove shield (#28), drive chain (#4), rear sealer plate (#27), bearing (#23), and sprocket assembly (#24). Retain bearing and sprocket assembly. Discard plastic plug (#22) and the steel tank plate (#30). **See page 64-65 of the parts reference manual.**

Step 2. Remove straight zerks from (3) three existing feed wheel shaft bearings. Install (3) three 45 degree zerks (#1A). Remove mounting bolts from same. Replace with 3/8" x 1-1/4" (#2) carriage bolts to enable bolting on agitator mounting plates (#15). Using the 1/8" wheel gauge, adjust feed wheels and tighten bolts. **See pages 122-123.**

Installing Feed Shaft Agitator Kits

Item	Quantity	Description
1	8	Rubber paddles
2	8	Paddle reinforcement plate
3	11	Hose Clamps
4	4	Finger agitator

Step 3. Mount the finger agitator (#18) in the center of the large spaces between feed wheels and tighten clamps securely. The finger agitator have been welded flush on one side, mount with this side against the shaft. **See pages 122-123.**

Step 4. Install the rubber paddles (#19) in the center of the small spaces between feed wheels. Make sure the paddle reinforcement plate (#20) is installed between the paddle and the hose clamp. **See pages 122-123.**

Step 5. Install (3) three small agitators (#13) in sequence on the 19" (#24) and 24" (#23) shafts and (6) six small agitators (#13) on the 33" (#21) shaft for the lower agitator. Install (3) three large agitators (#14) in sequence on the 19" (#24) and 24" (#23) shafts and (6) large agitators (#14) on the 33" (#21) shaft for the upper agitator. **See pages 122-123.**

Note: For a single bottom agitator kit, you will only need to assemble the shafts with the small agitators.

Step 6. Starting with shaft #24 slide cast housing and steel bearing over shaft and drive ¼" x 1-1/8" (#4) roll pin through bearing and shaft. Insert 5/32" x 1-1/2" (#3) cotter pin in #23 shaft and bend ends of key back over shaft, repeat this step for second agitator. **See pages 122-123.**

Step 7. Place the (3) three assembled shafts with small paddles in tank. For upper agitator, insert second agitator mounting plate (#17) between bearing and agitator mounting plates and bolt each together using 3/8" x 1-1/4" carriage bolts, lock washer, and hex nuts. **See pages 122-123.**

Note: For a single bottom agitator kit, assemble a bearing spacer plate (#16) between bearing and second agitator plate (#15).

Step 8. Kit contains 1-1/2" O.D. x 7/8" I.D. washers (#7). Add washers as needed to remove end play from agitator shaft. **See pages 122-123.**

Step 9. Bolt existing bearing and sprocket assembly (#A) (removed in step #1) to top end of agitator mounting plate (#7) using (2) existing 3/8" x 1-1/4" socket head screws (#18). Assemble collar (#8), bracket (#9), drive shaft stub (#10) and sprocket (#12) as shown, bolt above assembly to the bottom end of mounting plate (#7) using (2) 3/8" x 1-1/4" socket head screws (#18). **See pages 128-129.**

Step 10. Bolt completed assembly (step #9) to end of tank using existing 3/8" x 1-1/2" hex head machine bolt in top end, 3/8" x 1" (#20) hex head in bottom end along with wood block idler mount (#5). **See pages 128-129.**

Step 11. Bolt bearing and sprocket assembly (#16) with 24 tooth sprocket to upper agitator shaft using 3/8" x 1" (#20) hex head machine bolt in top slot and 3/8" x 1-1/2" (#19) hex head machine bolt in bottom hole with flat washers and hex nuts. **See pages 128-129.**

Note: Step #11 used only with a dual agitator.

Step 12. Loosen sprockets and bearings on 1" drive shaft (#30) and shift to the right to allow enough shaft to accommodate second drive sprocket. Align all respective sprockets and secure. **See pages 128-129.**

Step 13. Install both drive chains (#1 & #2). **See pages 128-129.**

Step 14. Install wood block idler (#4) using 3/8" x 2-1/2" (#21) hex head machine bolt. Adjust chain tension. **See pages 128-129.**

Step 15. Remove existing idler sprocket and spacer and install idler sprocket mount (#6) and existing idler sprocket using ½" x 1-1/2" hex head machine bolts. Adjust chain tension. **See pages 128-129.**

Step 16. Install existing shield (p.n. 8400243) for single agitator or new shield (p.n. 8400246) for double agitator using existing bolts. **See pages 128-129.**

107 Native Grass Kit Field Installation For single and double agitators

Kit for drills Serial No. 871551 and up

An agitator kit may be necessary when seeding grasses that will not flow freely into the feed wheels after removing feed wheel covers. The following steps and illustrations will enable you to install the agitator kit in the rear compartment of an existing Haybuster 107 drill box.

Step 1. Remove shield (#28), drive chain (#4), rear sealer plate (#27), bearing (#23), and sprocket assembly (#24). Retain bearing and sprocket assembly. Discard plastic plug (#22) and the steel tank plate (#30). **See page 64-65 of the parts reference manual.**

Step 2. Remove straight zerks from (3) three existing feed wheel shaft bearings. Install (3) three 45 degree zerks (#1A). Remove mounting bolts from same. Replace with 3/8" x 1-1/4" (#28) carriage bolts to enable bolting on agitator mounting plates (#23). Using the 1/8" wheel gauge, adjust feed wheels and tighten bolts. **See pages 124-125.**

Installing Feed Shaft Agitator Kits

Item	Quantity	Description
1	9	Rubber paddles
2	9	Paddle reinforcement plate
3	16	Hose Clamps
4	7	Finger agitator

Step 3. Mount the finger agitator (#4) in the center of the large spaces between feed wheels and tighten clamps securely. The finger agitator have been welded flush on one side, mount with this side against the shaft. **See pages 126-127.**

Step 4. Install the rubber paddles (#1) in the center of the small spaces between feed wheels. Make sure the paddle reinforcement plate (#2) is installed between the paddle and the hose clamp (#3). **See pages 126-127.**

Step 5. Install (6) three small agitators (#21) in sequence on the 38-7/16" (#18) and 34-1/2" (#20) shafts and (6) six small agitators (#21) on the 33" (#19) shaft for the lower agitator. Install (3) three large agitators (#22) in sequence on the 38-7/16" (#18) and 34-1/2" (#20) shafts and (6) large agitators (#22) on the 38-7/16" (#18) shaft for the upper agitator. **See pages 124-125.**

Note: For a single bottom agitator kit, you will only need to assemble the shafts with the small agitators.

Step 6. Starting with shaft #20 slide cast housing and steel bearing over shaft and drive ¼" x 1-1/8" (#15) roll pin through bearing and shaft. Insert 5/32" x 1-1/2" (#17) cotter pin in #18 shaft and bend ends of key back over shaft, repeat this step for second agitator. **See pages 124-125.**

Step 7. Place the (3) three assembled shafts with small paddles in tank. For upper agitator, insert second agitator mounting plate (#25) between bearing and agitator mounting plates and bolt each together using 3/8" x 1-1/4" carriage bolts, lock washer, and hex nuts. **See pages 124-125.**

Note: For a single bottom agitator kit, assemble a bearing spacer plate (#24) between bearing and second agitator plate (#23).

Step 8. Kit contains 1-1/2" O.D. x 7/8" I.D. washers (#16). Add washers as needed to remove end play from agitator shaft. **See pages 124-125.**

Step 9. Bolt existing bearing and sprocket assembly (#A) (removed in step #1) to top end of agitator mounting plate (#7) using (2) existing 3/8" x 1-1/4" socket head screws (#18). Assemble collar (#8), bracket (#9), drive shaft stub (#10) and sprocket (#12) as shown, bolt above assembly to the bottom end of mounting plate (#7) using (2) 3/8" x 1-1/4" socket head screws (#18). **See pages 128-129.**

Step 10. Bolt completed assembly (step #9) to end of tank using existing 3/8" x 1-1/2" hex head machine bolt in top end, 3/8" x 1" (#20) hex head in bottom end along with wood block idler mount (#5). **See pages 128-129.**

Step 11. Bolt bearing and sprocket assembly (#16) with 24 tooth sprocket to upper agitator shaft using 3/8" x 1" (#20) hex head machine bolt in top slot and 3/8" x 1-1/2" (#19) hex head machine bolt in bottom hole with flat washers and hex nuts. **See pages 128-129.**

Note: Step #11 used only with a dual agitator.

Step 12. Loosen sprockets and bearings on 1" drive shaft (#30) and shift to the right to allow enough shaft to accommodate second drive sprocket. Align all respective sprockets and secure. **See pages 128-129.**

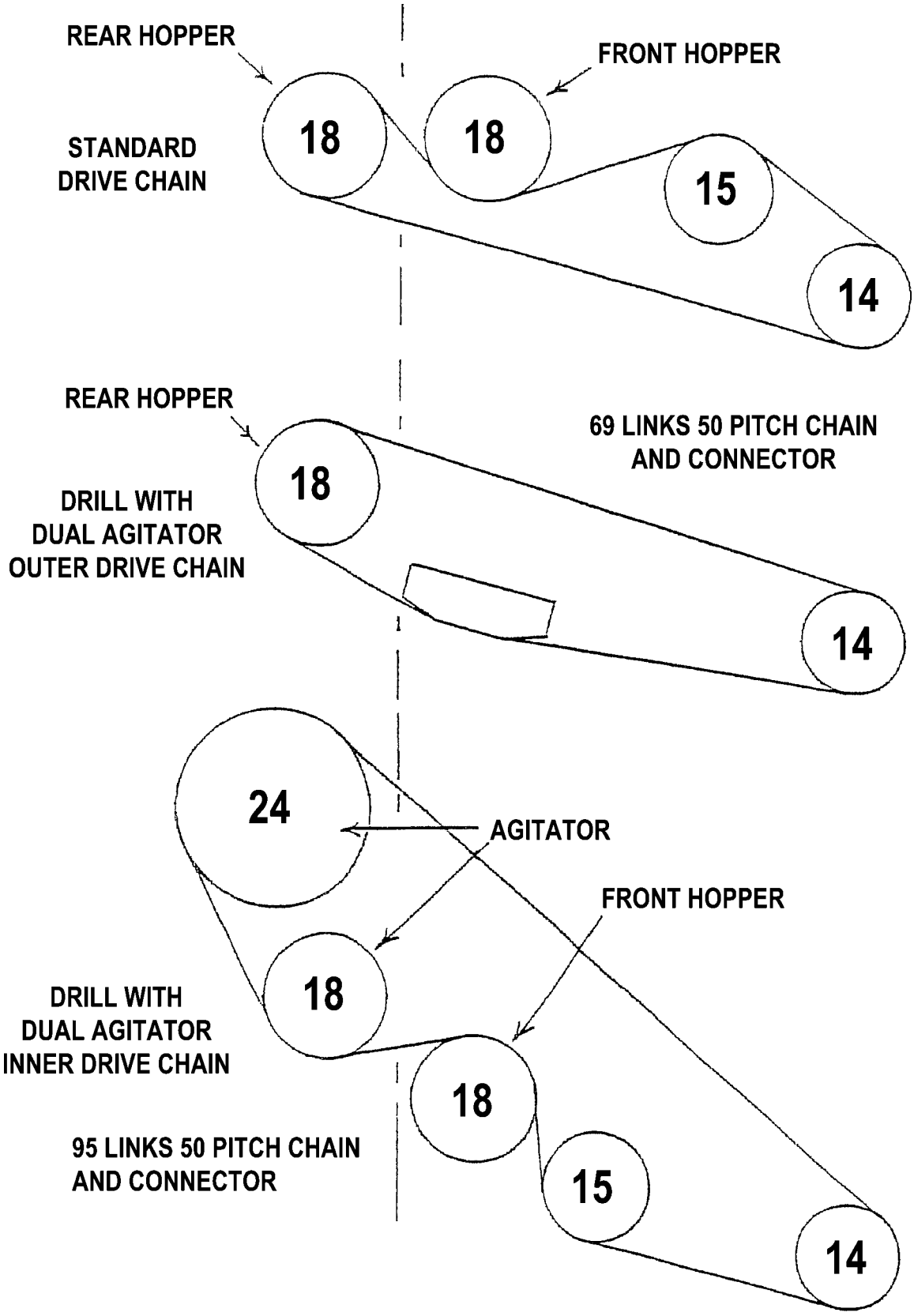
Step 13. Install both drive chains (#1 & #2). **See pages 128-129.**

Step 14. Install wood block idler (#4) using 3/8" x 2-1/2" (#21) hex head machine bolt. Adjust chain tension. **See pages 128-129.**

Step 15. Remove existing idler sprocket and spacer and install idler sprocket mount (#6) and existing idler sprocket using ½" x 1-1/2" hex head machine bolts. Adjust chain tension. **See pages 128-129.**

Step 16. Install existing shield (p.n. 8400243) for single agitator or new shield (p.n. 8400246) for double agitator using existing bolts. **See pages 128-129.**

Chain Routing (77 & 107)



PART NUMBER	QTY	DESCRIPTION
8400732		AGGTR\KIT\BTTM\SINGLE\BD1307
1000029	1	SPKT\B\50\14\1\1/4KW
1000175	1	SPKT\B\50\18\1\1/4KW
1100227	1	CHAIN\50NP\CL
1100236	1	CHAIN\50NP\75
2000016	1	BLK\WD\IDLER
3800098	3	FTG\LUB\1/4MPXZRK\45D
4800003	1	BOLT\HEX\3/8X1
4800012	12	BOLT\CRG\3/8X1-1/4\NC
4800029	1	BOLT\HEX\3/8X2-1/2
4800034	1	BOLT\HEX\3/8X1-1/2
4800044	1	PIN\COT\5/32X1-1/2
4800082	2	BOLT\HEX\1/2X1-1/2
4800169	1	PIN\RLLD\1/4X1-1/8
4800230	3	SCR\CSK\ALN\3/8X1-1/2\NC
4900001	2	NUT\HEX\1/2\NC
4900002	18	NUT\HEX\3/8\NC
5000001	6	WASH\FLAT\3/8
5000004	3	WASH\FLAT\1/2
5000006	2	WASH\LOCK\1/2
5000019	18	WASH\LOCK\3/8
5000027	4	WASH\7/8ID\1-1/2OD\18GA
5000055	3	WASH\SPNDL\7/8
6200014	2	KEY\SQ\1/4X1-1/4
7500107	11	CLAMP\HOSE\1-1/4\WORM\SS\
7500108	3	HSG\CAST\BUSH\TANK\DRILL
7500109	1	SLV\SQ_HL\5/8X1-7/16\W/5/16_THRU_HL
7500562	2	SLV\SQ_HL\5/8X1-1/4\1-7/16L\PLAIN
8400070	1	BRG\1-1/4\W/BRKT\3-HL
8400256	12	AGTTR\SM\CTR\DRILL
8400396	8	PDDL\RBBR\1/4X1-1/4X2-3/4
8400397	8	PL\REIN\PADDLER\1-1/4SQ
8400423	1	SHFT\TANK\33-1/16\DRILL
8400438	1	SHFT\DRIVE\EXT\DRILL
8400573	1	SHFT\DR\TANK\1X38
8400708	1	SHFT\TANK\23-15/16\DRILL
8400710	1	SHFT\TANK\19"\DRILL
8400240	1	MNT\SPKT\IDLER\REAR\BD1307
8400241	1	MNT\SPKT\IDLER\FR\BD1307
8400259	3	BRKT\BRG\LOWER\DRILL
8400260	3	PL\SPCR\BRG\BD1307
8400267	4	AGGTR\FINGER\DRILL\BD1307

PART NUMBER	QTY	DESCRIPTION
8400731		ATTACH\NTV-GRASS\KIT\77
0501036	1	INSTR\KIT\77\NATIVE GRASS
1000029	1	SPKT\B\50\14\1\1/4KW
1000175	1	SPKT\B\50\18\1\1/4KW
1100226	1	CHAIN\50NP
1100227	3	CHAIN\50NP\CL
1100228	1	CHAIN\50NP\OL
1100237	1	CHAIN\50NP\95
2000016	1	BLK\WD\IDLER
3800082	4	FTG\LUB\1/4NFXZRK\ADPT
3800098	3	FTG\LUB\1/4MPXZRK\45D
4800003	2	BOLT\HEX\3/8X1
4800012	18	BOLT\CRG\3/8X1-1/4\NC
4800044	1	PIN\COT\5/32X1-1/2
4800081	18	BOLT\HEX\5/16X1-1/2
4800142	2	BOLT\HEX\3/8X1-3/4
4800156	2	BOLT\HEX\3/8X3
4800169	3	PIN\RLLD\1/4X1-1/8
4800178	2	BOLT\HEX\1/2X1-3/4
4800230	2	SCR\CSK\ALN\3/8X1-1/2\NC
4900001	2	NUT\HEX\1/2\NC
4900002	24	NUT\HEX\3/8\NC
4900003	18	NUT\HEX\5/16\NC
4900076	12	NUT\FLG\SERR\3/8\NC
5000001	10	WASH\FLAT\3/8
5000004	4	WASH\FLAT\1/2
5000006	2	WASH\LOCK\1/2
5000019	16	WASH\LOCK\3/8
5000022	18	WASH\LOCK\5/16
5000023	18	WASH\FLAT\5/16
5000027	12	WASH\7/8ID\1-1/2OD\18GA
5000055	6	WASH\SPNDL\7/8
6200014	2	KEY\SQ\1/4X1-1/4
7500107	11	CLAMP\HOSE\1-1/4\WORM\SS\
7500108	6	HSG\CAST\BUSH\TANK\DRILL
7500109	2	SLV\SQ_HL\5/8X1-7/16\W/5/16_THRU_HL
7500168	12	HOSE\2"\CONVOLUTED\2GRASS
7500169	24	CLAMP\SDHOSE\2\CP-34
7500359	12	FINISH CAPS FCR-20
7500562	4	SLV\SQ_HL\5/8X1-1/4\1-7/16L\PLAIN
8400070	1	BRG\1-1/4\W/BRKT\3-HL
8400239	1	PL\SEAL\W/SPKT\W/BRG\ASSY
8400240	1	MNT\SPKT\IDLER\REAR\77
8400241	1	MNT\SPKT\IDLER\FR\77
8400246	1	SHLD\AGTTR\DUAL\77
8400249	1	CUP\SEED\SECT\LH\CTR
8400250	1	CUP\SEED\SECT\RH\CTR
8400256	12	AGTTR\SM\CTR\DRILL
8400257	12	AGTTR\LRG\CTR\DRILL
8400259	3	BRKT\BRG\LOWER\DRILL
8400261	3	BRKT\BRG\UPPER\77
8400267	4	AGGTR\FINGER\DRILL\77
8400396	8	PDDL\RBBR\1/4X1-1/4X2-3/4
8400397	8	PL\REIN\PADDLER\1-1/4SQ
8400423	2	SHFT\TANK\33-1/16\DRILL
8400438	1	SHFT\DRIVE\EXT\DRILL
8400677	1	NTV\GRASS\SHIP\KIT\77
8400690	12	TUBE\DROP\OVERSIZED
8400708	2	SHFT\TANK\23-15/16\DRILL
8400710	2	SHFT\TANK\19"\DRILL
8400738	1	SHFT\DRV\77\NTV_GR\1X23.5

PART NUMBER	QTY	DESCRIPTION
8400614		AGGTR\KIT\BTTM\SINGLE\107
1000029	1	SPKT\B\50\14\1\1/4KW
1000175	1	SPKT\B\50\18\1\1/4KW
1100227	1	CHAIN\50NP\CL
1100282	1	CHAIN\50NP\69
2000016	1	BLK\WD\IDLER
3800098	3	FTG\LUB\1/4MPXZRK\45D
4800003	1	BOLT\HEX\3/8X1
4800012	12	BOLT\CRG\3/8X1-1/4\NC
4800029	1	BOLT\HEX\3/8X2-1/2
4800034	1	BOLT\HEX\3/8X1-1/2
4800044	1	PIN\COT\5/32X1-1/2
4800082	2	BOLT\HEX\1/2X1-1/2
4800169	1	PIN\RLLD\1/4X1-1/8
4800230	3	SCR\CSK\ALN\3/8X1-1/2\NC
4900001	2	NUT\HEX\1/2\NC
4900002	18	NUT\HEX\3/8\NC
5000001	6	WASH\FLAT\3/8
5000004	3	WASH\FLAT\1/2
5000006	2	WASH\LOCK\1/2
5000019	18	WASH\LOCK\3/8
5000027	4	WASH\7/8ID\1-1/2OD\18GA
5000055	3	WASH\SPNDL\7/8
6200014	2	KEY\SQ\1/4X1-1/4
7500107	16	CLAMP\HOSE\1-1/4\WORM\SS\
7500108	3	HSG\CAST\BUSH\TANK\DRILL
7500109	1	SLV\SQ_HL\5/8X1-7/16\W/5/16_THRU_HL
7500562	2	SLV\SQ_HL\5/8X1-1/4\1-7/16L\PLAIN
8400070	1	BRG\1-1/4\W/BRKT\3-HL
8400240	1	MNT\SPKT\IDLER\REAR\BD1307
8400241	1	MNT\SPKT\IDLER\FR\BD1307
8400256	18	AGTTR\SM\CTR\DRILL
8400259	3	BRKT\BRG\LOWER\DRILL
8400260	3	PL\SPCR\BRG\77
8400267	7	AGGTR\FINGER\DRILL\77
8400396	9	PDDL\RBBR\1/4X1-1/4X2-3/4
8400397	9	PL\REIN\PADDLER\1-1/4SQ
8400423	1	SHFT\TANK\33-1/16\DRILL
8400425	1	SHFT\TANK\34-1/2\DRILL
8400426	1	SHFT\TANK\38-7/16\DRILL
8400438	1	SHFT\DRIVE\EXT\DRILL
8400573	1	SHFT\DR\TANK\1X38

PART NUMBER	QTY	DESCRIPTION
8400580		ATTACH\NTV-GRASS\KIT\107
1000029	1	SPKT\B\50\14\1\1/4KW
1000175	1	SPKT\B\50\18\1\1/4KW
1100226	1	CHAIN\50NP
1100227	3	CHAIN\50NP\CL
1100228	1	CHAIN\50NP\OL
1100237	1	CHAIN\50NP\95
2000016	1	BLK\WD\IDLER
3800082	3	FTG\LUB\1/4NFXZRK\ADPT
3800098	3	FTG\LUB\1/4MPXZRK\45D
4800003	2	BOLT\HEX\3/8X1
4800012	18	BOLT\CRG\3/8X1-1/4\NC
4800050	2	PIN\COT\3/16X1-1/4\NC
4800081	18	BOLT\HEX\5/16X1-1/2
4800142	2	BOLT\HEX\3/8X1-3/4
4800156	2	BOLT\HEX\3/8X3
4800169	3	PIN\RLLD\1/4X1-1/8
4800178	2	BOLT\HEX\1/2X1-3/4
4800230	2	SCR\CSK\ALN\3/8X1-1/2\NC
4900001	2	NUT\HEX\1/2\NC
4900002	12	NUT\HEX\3/8\NC
4900003	18	NUT\HEX\5/16\NC
4900076	12	NUT\FLG\SERR\3/8\NC
5000001	10	WASH\FLAT\3/8
5000004	4	WASH\FLAT\1/2
5000006	2	WASH\LOCK\1/2
5000019	16	WASH\LOCK\3/8
5000022	18	WASH\LOCK\5/16
5000023	18	WASH\FLAT\5/16
5000027	12	WASH\7/8ID\1-1/2OD\18GA
5000055	6	WASH\SPNDL\7/8
6200014	2	KEY\SQ\1/4X1-1/4
7500107	16	CLAMP\HOSE\1-1/4\WORM\SS\
7500108	6	HSG\CAST\BUSH\TANK\DRILL
7500109	2	SLV\SQ_HL\5/8X1-7/16\W/5/16_THRU_HL
7500168	18	HOSE\2"\CONVOLUTED\2GRASS
7500169	36	CLAMP\SDHOSE\2\CP-34
7500359	18	FINISH CAPS FCR-20
7500562	4	SLV\SQ_HL\5/8X1-1/4\1-7/16L\PLAIN
8400070	1	BRG\1-1/4\W/BRKT\3-HL
8400239	1	PL\SEAL\W/SPKT\W/BRG\ASSY
8400240	1	MNT\SPKT\IDLER\REAR
8400241	1	MNT\SPKT\IDLER\FR
8400246	1	SHLD\AGTTR\DUAL\107-DRILL
8400248	1	CUP\SEED\SECT\LH\107>
8400249	1	CUP\SEED\SECT\LH\CTR
8400250	1	CUP\SEED\SECT\RH\CTR
8400251	1	CUP\SEED\SECT\RH\107>
8400256	18	AGTTR\SM\CTR\DRILL
8400257	17	AGTTR\LRG\CTR\DRILL
8400258	1	AGTTR\LRG\OFFSET\DRILL
8400259	3	BRKT\BRG\LOWER\DRILL
8400261	3	BRKT\BRG\UPPER\77
8400267	7	AGGTR\FINGER\DRILL
8400396	9	PDDL\RBBR\1/4X1-1/4X2-3/4
8400397	9	PL\REIN\PADDLER\1-1/4SQ
8400423	2	SHFT\TANK\33-1/16\DRILL
8400425	2	SHFT\TANK\34-1/2\DRILL
8400426	2	SHFT\TANK\38-7/16\DRILL
8400438	1	SHFT\DRIVE\EXT\DRILL
8400573	1	SHFT\DRIVE\EXT\DRILL
8400677	1	NTV\GRASS\SHIP\KIT\77
8400690	12	TUBE\DROP\OVERSIZED

NOTES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