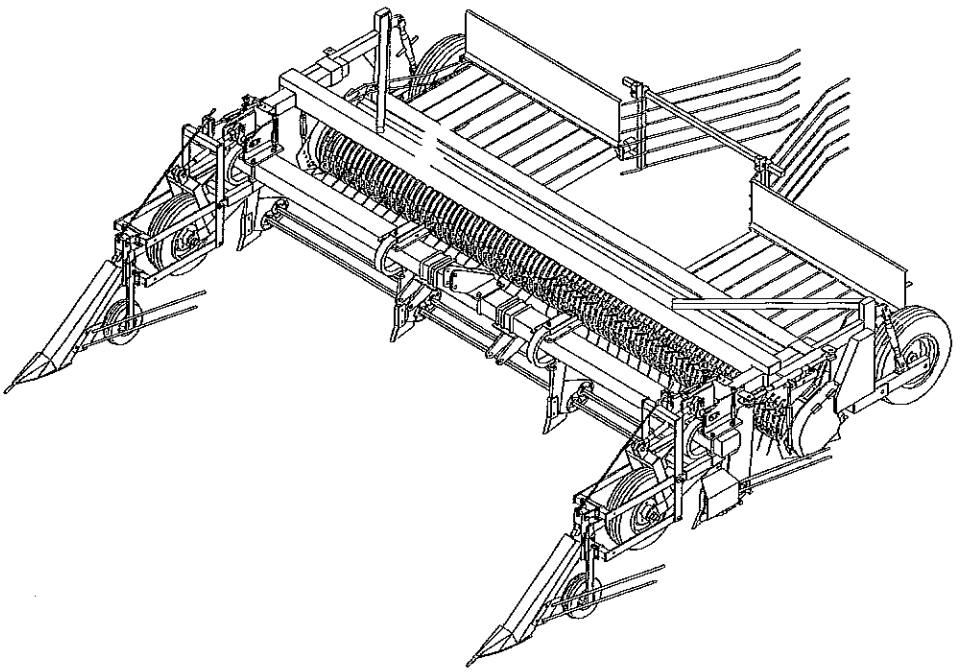
Harriston
INDUSTRIES



1998 Windrower Manual & Parts Book

1 INTRODUCTION

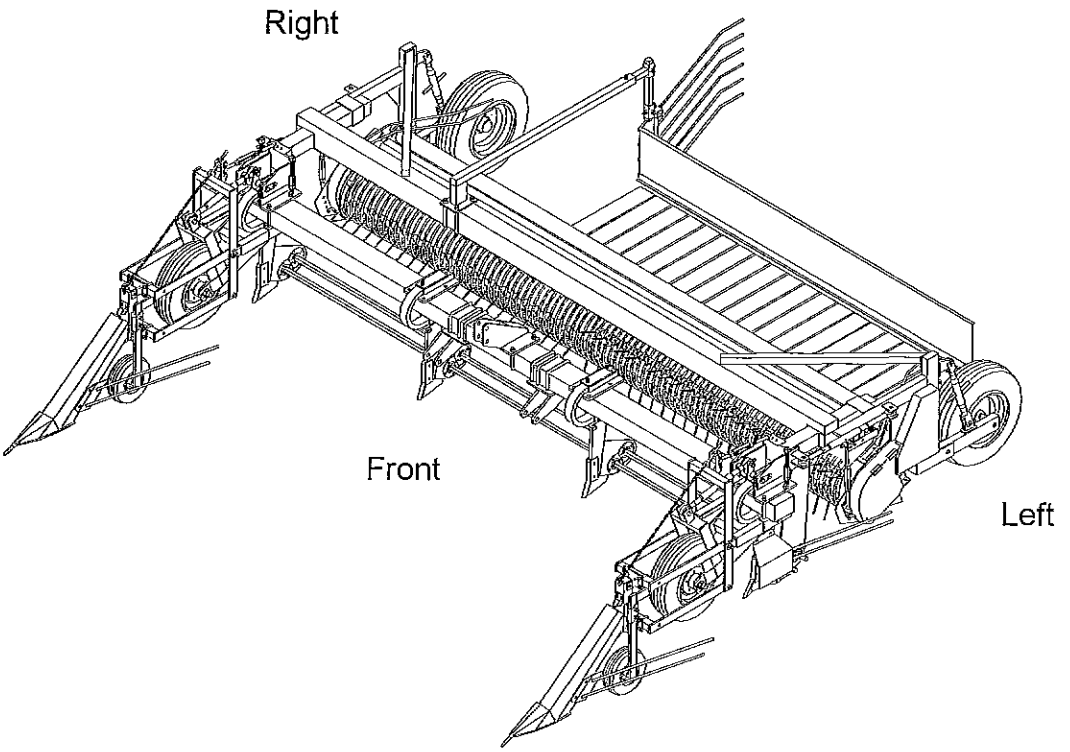
Congratulations on your choice of a Harriston Windrower to complement your farming operation. This equipment has been designed and manufactured to meet the needs of a discerning bean industry for the efficient harvesting of beans.

Safe, efficient, and trouble-free operation of your Harriston Windrower requires that you and anyone else who will be operating or maintaining the Windrower read and understand all of the safety, operation, maintenance, and trouble shooting information contained in this Operator's Manual.

Keep this manual handy for frequent reference and to pass on to new operators and owners. Call your Harriston dealer or distributor if you need assistance, information, or additional copies of the manual.

This manual covers the windrower-rod. There are many different combinations and optional equipment available. Differences are explained where appropriate.

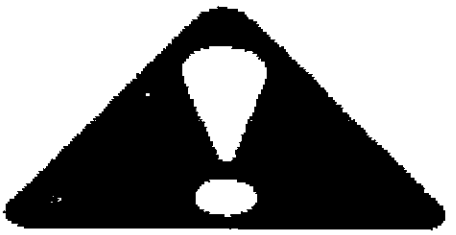
Operator Orientation - The directions left, right, front and rear, as mentioned throughout the manual, are as seen from the driver's seat and facing in the direction of travel.



SAFETY ALERT SYMBOL

This Safety Alert symbol means
ATTENTION! BECOME ALERT!
YOUR SAFETY IS INVOLVED!

The Safety Alert symbol identifies important safety messages on the Harriston Planter and in the manual. When you see this symbol, be alert to the possibility of personal injury or death. Follow the instructions in the safety message.



Why is SAFETY important to you?

3 Big Reasons

Accidents Disable and Kill
Accidents Cost
Accidents Can Be Avoided

SIGNAL WORDS:

Note the use of the signal words **DANGER**, **WARNING**, AND **CAUTION** with the safety messages. The appropriate signal word for each message has been selected using the following guidelines:

DANGER - An immediate and specific hazard which WILL result in severe personal injury or death if the proper precautions are not taken.

WARNING - A specific hazard or unsafe practice which COULD result in severe personal injury or death if proper precautions are not taken.

CAUTION - Unsafe practices which could result in personal injury if proper practices are not taken, or as a reminder of good safety practices.

SAFETY

YOU are responsible for the SAFE operation and maintenance of your Harriston Windrower. **YOU** must ensure that you and anyone else who is going to operate, maintain, or work around the Windrower be familiar with the operating and maintenance procedures and related SAFETY information contained in this manual. This manual will take you step-by-step through your working day and alerts you to all good safety practices that should be adhered to while operating the Windrower.

Remember, **YOU** are the key to safety. Good safety practices not only protect you but also the people around you. Make these practices a working part of your safety program. Be certain that **EVERYONE** operating this equipment is familiar with the recommended operating and maintenance procedures and follows all the safety precautions. Most accidents can be prevented. Do not risk injury by ignoring good safety practices.

Windrower owners must give operating instructions to operators or employees before allowing them to operate the Windrower, and at least annually thereafter per OSHA (Occupational Safety and Health Administration) regulation 1928.57.

The most important safety device on this equipment is a SAFE operator. It is the operator's responsibility to read and understand ALL safety and operating instructions in the manual and to follow them. All accidents can be avoided.

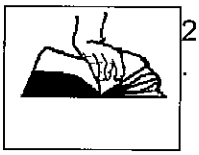
A person who has not read and understood all operating and safety instructions is not qualified to operate the machine. An untrained operator exposes himself and bystanders to possible serious injury or death.

Do not modify the equipment in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the equipment.

Think SAFETY! Work SAFELY!

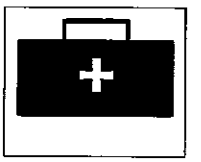
GENERAL SAFETY

1. Read and understand the Operator's Manual and all safety signs before operating, maintaining, or adjusting the Windrower.



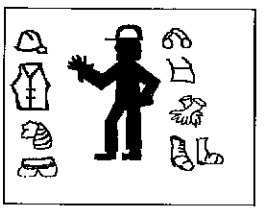
2.

Provide a first-aid kit for use in case of an accident. Store in a highly visible place.



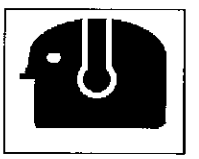
3. Provide a fire extinguisher for use in case of an accident. Store in a highly visible place.

4. Wear appropriate protective gear. This list includes, but is not limited to:
   - A hard hat
   - Protective shoes with slip resistant soles
   - Protective glasses or goggles
   - Heavy gloves
   - Wet weather gear
   - Hearing protection
   - Respirator or filter mask



5. Install and secure all guards before starting.
6. Do not allow riders.

7. Wear suitable ear protection for prolonged exposure to excessive noise.



8. Stop tractor engine, lower machine to the ground, place all controls in neutral, set park brake, remove ignition key, and wait for all moving parts to stop before servicing, adjusting, repairing, or unplugging.

9. Clear the area of people, especially small children, before starting the unit.

10. Review safety related items annually with all personnel who will be operating or maintaining the Windrower.

OPERATING SAFETY

1. Read and understand the Operator's Manual and all safety signs before operating, servicing, adjusting, repairing, or unplugging.

2. Do not allow riders.

3. Install and secure all guards and shields before starting or operating.

4. Keep hands, feet, hair, and clothing away from moving parts.

5. Stop tractor engine, lower machine to the ground, place all controls in neutral, set park brake, remove ignition key, and wait for all moving parts to stop before servicing, adjusting, repairing, or unplugging.

6. Place all tractor controls in neutral before starting.

7. Operate machine only while seated on the tractor seat.

8. Clear the area of bystanders, especially small children, before starting.

9. Keep all hydraulic lines, fittings, and couplers tight and free of leaks before using.

10. Clean Reflectors, Slow Moving Vehicle, and lights before transporting.

11. Add extra lights and use pilot vehicle when transporting during times of limited visibility.

12. Use hazard flashers on tractor when transporting.

13. Review safety instructions with all operators annually.

MAINTENANCE SAFETY

1. Follow all the operating, maintenance, and safety information in the manual.

2. Support the machine with blocks or safety stands when changing tires or working beneath it.

3. Stop tractor engine, lower machine to the ground, place all controls in neutral, set park brake, remove ignition key, and wait for all moving parts to stop before servicing, adjusting, repairing, unplugging, or filling.

4. Make sure all guards are in place and properly secured when maintenance work is completed.

5. Never wear ill-fitting, baggy, or frayed clothing when working around or on any of the drive system components.

6. Before applying pressure to a hydraulic system, make sure all lines, fittings, and couplers are tight and in good condition.

7. Relieve pressure from hydraulic circuit before servicing or disconnecting from tractor.

8. Keep hands, feet, hair, and clothing away from moving or rotating parts.

9. Clear the area of bystanders, especially small children, when carrying out any maintenance and repairs or making an adjustments.

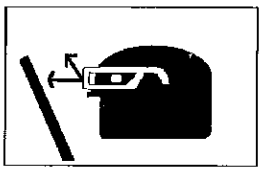
HYDRAULIC SAFETY

1. Make sure that all components in the hydraulic system are kept in good condition and are clean.

2. Replace any worn, cut, abraded, flattened, or crimped hoses and metal lines.

3. Do not attempt any makeshift repairs to the hydraulic lines, fittings, or hoses by using tape clamps, or cements. The hydraulic system operates under extremely high pressure. Such repairs will fail suddenly and create a hazardous and unsafe condition.

4. Wear proper hand and eye protection when searching for a high-pressure hydraulic leak. Use a piece of wood or cardboard as a backstop instead of hands to isolate and identify a leak.



5. If injured by a concentrated high-pressure stream of hydraulic fluid, seek medical attention immediately. Serious infection or toxic reaction can develop from hydraulic fluid piercing the skin surface.

6. Before applying pressure to the system, make sure all components are tight and that lines, hoses, and couplings are not damaged.

TRANSPORT SAFETY

1. Make sure you are in compliance with all local regulations regarding transporting equipment on public roads and highways.

2. Make sure the SMV (Slow Moving Vehicle) emblem and all the lights and reflectors that are required by the local highway and transport authorities are in place, are clean, and can be seen clearly by all overtaking and oncoming traffic.

3. Do not allow anyone to ride on the Windrower or tractor during transport.

4. Do not exceed 20 mph. Reduce speed on rough roads and surfaces.

STORAGE SAFETY

1. Store away from areas of human activity. Do not permit children to play on or around the stored machine.

2. Make sure the unit is sitting, or blocked up firm and solid and will not tip or sink into a soft area.

3. Cover with a weather - proof tarpaulin and tie down securely.

TIRE SAFETY

1. Failure to follow proper procedures when mounting a tire on a wheel or rim can produce an explosion which may result in serious injury or death.

2. Do not attempt to mount a tire unless you have the proper equipment and experience to do the job.

3. Have a qualified tire dealer or repair service perform required tire maintenance.

ASSEMBLY SAFETY

1. Assemble in an area with sufficient space to handle the largest component and access to all sides of machine.

2. Use only lifts, cranes, jacks, and tools, with sufficient capacity for the load.

3. Use two people to handle the large bulky components.

4. Do not allow spectators in the working area.

SAFETY DECALS

1. Keep safety decals and signs clean and legible at all times.

2. Replace safety decals and signs that are missing or have become illegible.

3. Replaced parts that displayed a safety sign should also display the current sign.

4. Safety decals or signs are available from your Dealer Parts Department.

HOW TO INSTALL SAFETY DECALS

1. Be sure that the installation area is clean and dry.

2. Decide on the exact position before you remove the backing paper.

3. Remove the smallest portion of the split backing paper.

4. Align the decal over the specified area and carefully press the small portion with the exposed sticky backing in place.

5. Slowly peel back the remaining paper and carefully smooth the remaining portion of the decal in place.

6. Small air pockets can be pierced with a pin and smoothed out using the piece of decal backing paper.

SIGN OFF FORM

Harriston Industries follows the general Safety Standards specified by the American Society of Agricultural Engineers (ASAE) and the Occupational Safety and Health Administration (OSHA). Anyone who will be operating and/or maintaining the Windrower must read and clearly understand ALL Safety, Operating, and Maintenance information presented in this manual.

Do not operate or allow anyone else to operate this equipment until such information has been reviewed. Annually review this information before the season start-up.

Make these periodic reviews of Safety and Operation a standard practice for all of your equipment. We feel that an untrained operator is unqualified to operate this machine.

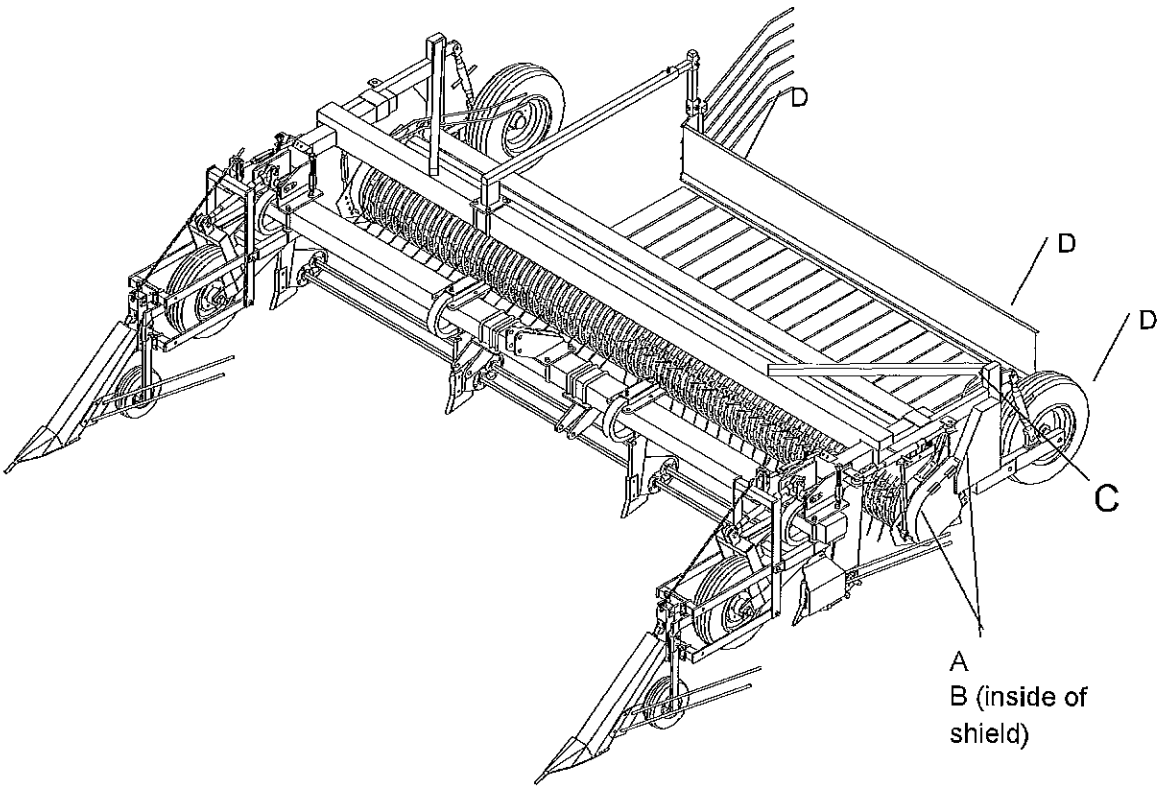
A sign-off sheet is provided for your record keeping to show that all personnel who will be working with the equipment have read and understand the information in the Operator's Manual and have been instructed in the operation of the equipment.

SIGN - OFF FORM

DATE	EMPLOYEES SIGNATURE	EMPLOYERS SIGNATURE

SAFETY DECAL LOCATIONS

The types of decals and locations on the equipment are shown in the illustration below. Good safety requires that you familiarize yourself with the various Safety Decals, the type of warning, and the area, or particular function related to that area, that requires your SAFETY AWARENESS.



REMEMBER - If Safety Decals have been damaged, removed, become illegible, or parts replaced without decals, new decals must be applied. New decals are available from your authorized dealer.

A

ROTATING PART HAZARD

- Keep all guards and shields in place
- Keep hands, feet, hair, and clothing away from moving parts
- Keep others away

FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN INJURY OR DEATH

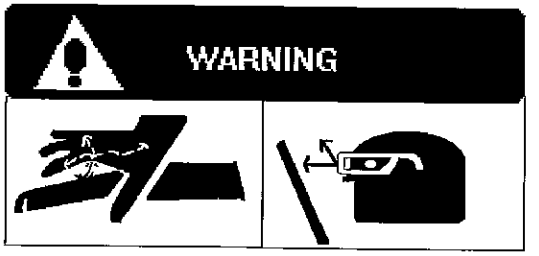
B

MISSING SHIELD HAZARD

- Install and secure shields before operating.
- Keep hands, feet, hair and clothing away from moving parts

FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN SERIOUS INJURY OR DEATH

C



HIGH PRESSURE FLUID HAZARD

- Relieve pressure on system before repairing or adjusting.
- Wear proper hand and eye protection when searching for leaks. Use wood or cardboard instead of hands.
- Keep all compounds in good repair.

FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN SERIOUS INJURY OR DEATH

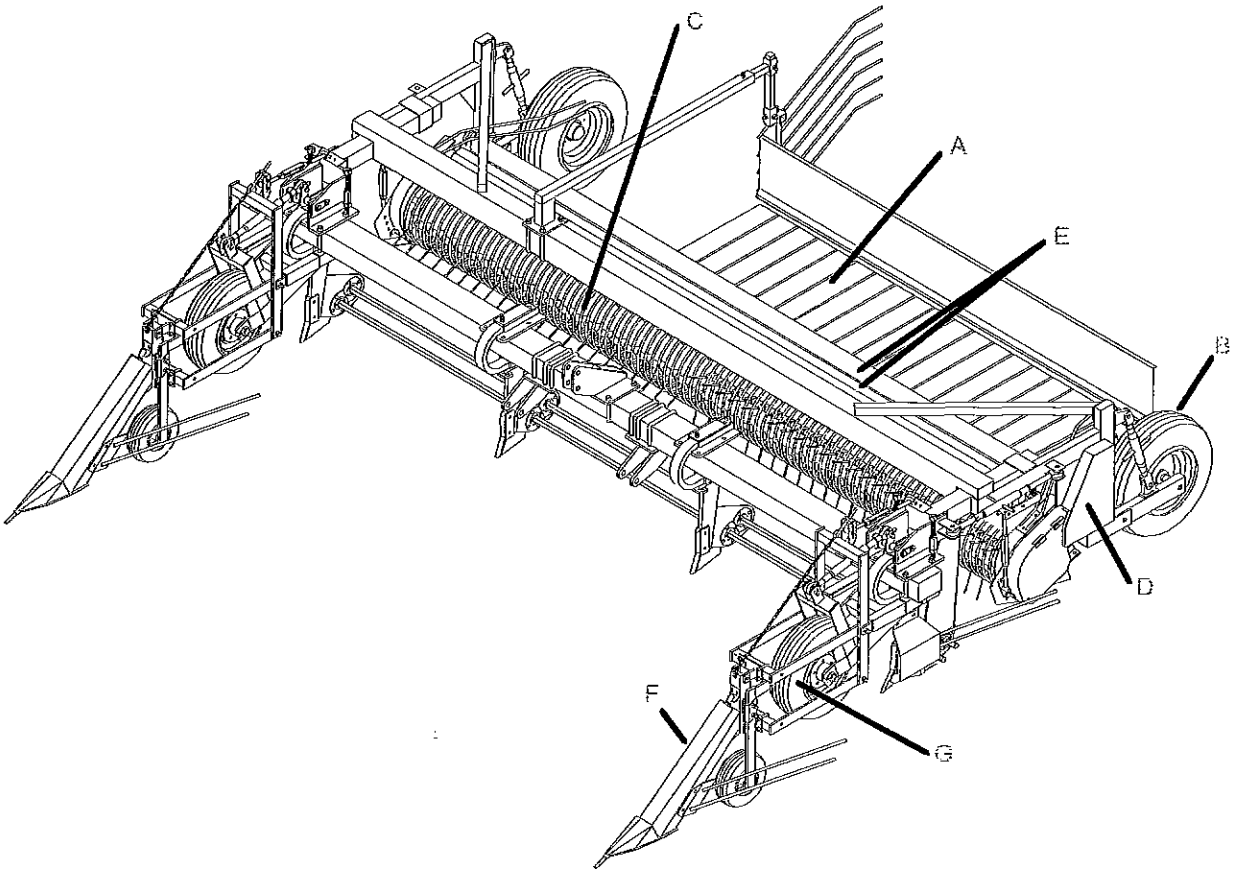
D

MOVING PART HAZARD
To prevent serious injury or death:

- Do not stand or climb on machine when operating. Keep others away.
- Stop machine, disconnect power lines and wait for moving parts to stop before opening to adjust, service, lubricate or unplug.
- Keep hands, feet, hair and clothing away from moving parts.

PRINCIPLE COMPONENTS

The Harriston Windrower can be used with a pole hitch, 3-pt hitch, or with a Harriston Bean Rod. The rod lifts the beans from the ground. The pickup teeth move the beans onto the two separating rollers eliminating dirt. The rollers move the beans onto the draper where it is delivered into a windrow. The drive for both machines is by hydraulic motors. The draper is powered by separate hydraulic motor.

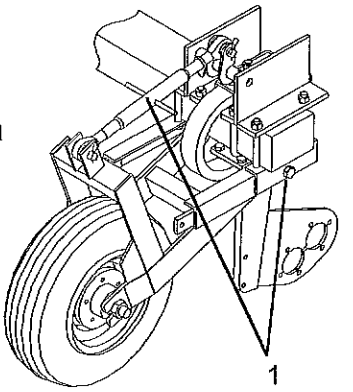


PRINCIPLE COMPONENTS

A	Draper
B	Gauge Wheel (Rear)
C	Pickup Assembly / Stripper Rods/ Pickup Teeth
D	Drive System
E	Separating Rollers
F	Dividers
G	Gauge Wheel (Rod)

ASSEMBLY

For detailed assembly drawings, see the windrower parts book.

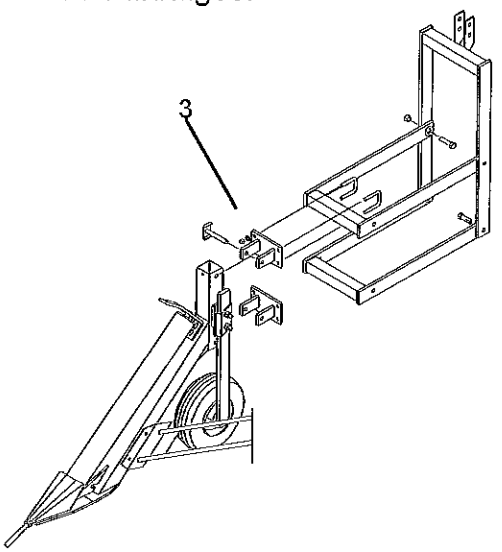


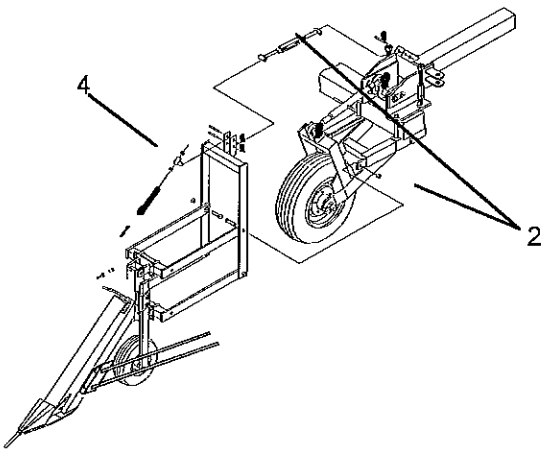
1. Assemble the heavy duty rod gauge wheels to the rod, and attach the 1" turnbuckle.

2. Assemble the divider linkages to the angle irons on the bean rod, and attach the smaller turnbuckle.

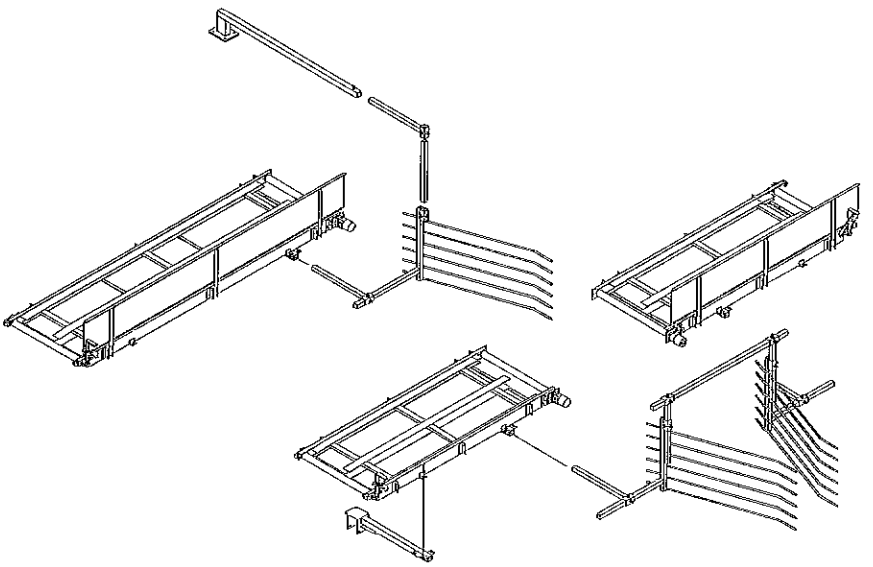
3. Assemble the divider to the linkages as shown.

4. Assemble the eyebolt and chain between the divider and the divider linkages.





Assemble the rear buncher according to the drawings. Use the slide tubes to position the rods. Bend the rods in the field to obtain the desired windrow. The end delivery draper uses a brace arm that attaches to the front 5 x 7 bar. The center delivery does not require this brace.



Divider Mount for Tractor

1. Assemble the tractor mounts to the tractor.

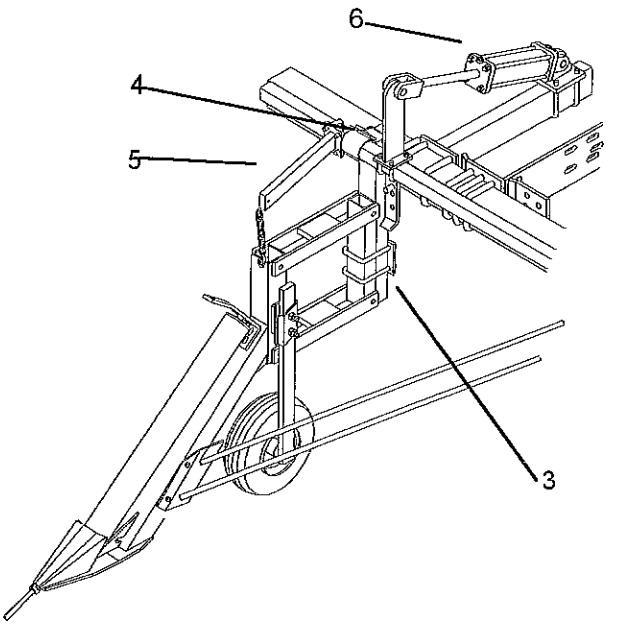
2. Attach 4 x 4 toolbar to tractor mounts.

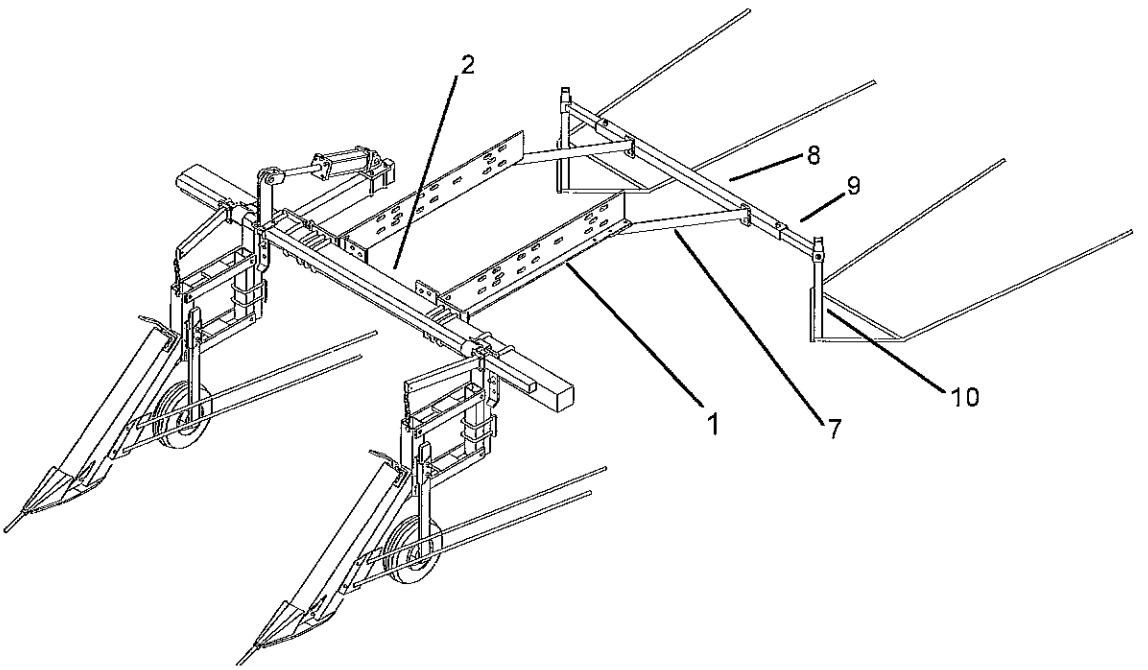
3. Attach divider mount tubes to 4 x 4 and dividers to mount tubes.

4. Assemble pivot pipes onto the divider mount tubes and put the 2 x 2 lift tube through the pivot pipes.

5. Attach the lift tubes on the 2 x 2 lift tube and attach the chain to the divider.

6. Assemble the cylinder lift arm and cylinder as shown in the drawing.





7. Attach angle brackets to the tractor mounts

8. Assemble the rear divider mount tube to the two angle brackets.

9. Slide the rear divider mounts into each side of the rear mount tube.

10. Slide the rear row divider up into the tube as shown.

OPERATING SAFETY

1. Read and understand the Operator's Manual and all safety signs before operating, servicing, adjusting, repairing, unplugging, or filling.

2. Do not allow riders.

3. Install and secure all guards and shields before starting or operating.

4. Keep hands, feet, hair, and clothing away from moving parts.

5. Stop tractor engine, lower machine to the ground, place all controls in neutral, set park brake, remove ignition key, and wait for all moving parts to stop before servicing, adjusting, repairing, or unplugging.

6. Place all tractor controls in neutral before starting.

7. Operate machine only while seated on the tractor seat.

8. Clear the area of bystanders, especially small children, before starting.

9. Keep all hydraulic lines, fittings, and couplers tight and free of leaks before using.

10. Clean reflectors, SMV, and lights before transporting.

11. Add extra lights and use pilot vehicle when transporting during times of limited visibility.

12. Use hazard flashers on tractor when transporting.

13. Review safety instructions with all operators annually.

TO THE NEW OPERATOR OR OWNER

The Harriston Windrower - Rod is designed to lift the beans from the soil and put them in a windrow for harvesting. Be familiar with the machine before starting.

It is the responsibility of the owner or operator to read this manual and to train all other operators before they start working with the machine. Follow all safety instructions exactly. Safety is everyone's business. By following recommended procedures, a safe working environment is provided for the operator, bystanders and the area around the worksite. Untrained operators are not qualified to operate the machine.

Many features incorporated into this machine are the result of suggestions made by customers like you. Read this manual carefully to learn how to operate the machine safely and how to set it to provide maximum field efficiency. By following the operating instructions in conjunction with a good maintenance program, your Windrower will provide many years of

MACHINE BREAK-IN

Although there are no operational restrictions on the Windrower when used for the first time it is recommended that the following mechanical items be checked:

A. After operating for 1/2 hour or after completing 5 acres:
   1. Check all nuts, bolts, 3 pt u-bolts, and other fasteners. Tighten to their specified torque level.

   2. Tighten wheel bolts to their specified torque levels.

   3. Check that the pickup teeth are in good condition and cam arms rotate freely.

   4. Lubricate all grease points.

B. After operating for 5 hours and 10 hours:
   1. Repeat items 1 through 3 of Section A.

   2. Then go to the regular service schedule as defined on Page 22.

PRE-OPERATION CHECKLIST

Efficient and safe operation of the Windrower requires that each operator reads and understands the operating procedures and all related safety precautions outlined in this section. A pre-operation checklist is provided for the operator. It is important for both the personal safety and maintaining the good mechanical condition of the Windrower that this checklist is followed.

Before operating the machine and each time thereafter, the following areas should be checked off:

1. Lubricate the machine per the schedule outlined on Page 22.

2. Use only a tractor of adequate power, weight, and hydraulic capability.

3. Check that the machine is properly attached to the tractor. Be sure retainers are used on the mounting pins.

4. Check the tire pressure. Bring to the specified level.

5. Check the pickup teeth. Be sure they are not damaged or broken. Replace as required.

6. Inspect all hydraulic lines, hoses, couplers, and fittings. Tighten, repair or replace any leaking or damaged components.

7. Install and secure all guards, doors, and covers before starting.

EQUIPMENT MATCHING

To insure the safe and reliable operation of the Windrower, it is necessary to use a tractor with the correct specifications. Use the following list as a guide in selecting a tractor to use on the machine.

1. Hydraulic Requirements

Use the following guide in selecting the tractor appropriate to your machine.

6-30 Rod / Windrower 18 gal. / min. at 2500 psi with 125 hp. tractor	6-30 Windrower 12 gal. / min. at 2250 psi (lift 5500 lbs.)
8-30 Rod / Windrower 22 gal. / min. at 2500 psi with 140 hp. tractor	8-30 Windrower 12 gal. / min. at 2250 psi (lift 7500 lbs.)
12-22 Rod / Windrower 22 gal. / min. at 2500 psi with 160 hp. tractor	12-22 Windrower 12 gal. / min. at 2250 psi (lift 7500 lbs.)

2. 3 point Hitch

The 3 point hitch models require the tractor to be equipped with a Category II or Category III 3 point hitch. The upper pin on the windrower-rod is 1-1/4" diameter for both Cat. II and Cat. III.

ATTACHING / UNHOOKING TRACTOR

The Windrower should always be located on a level, dry area that is free of debris and other foreign objects. When attaching the machine to a tractor, follow this procedure:

1. Clear the area of bystanders, especially small children.

2. Make sure there is enough room and clearance to safely back up to the Windrower.

WARNING

Do not allow anyone to stand between the tractor and Windrower when backing up to the machine.

On the 3 point:

a. Set the height of the 3 point hitch so the Quick Hitch claws are lower than the mounting pins.

b. Be sure the lower links on the tractor are set in the free float position (See tractor manual for details).

c. Be sure the 3 point hitch is set in the non-sway position (See tractor manual for details).

d. Align the claws under the mounting pins while backing up.

e. When the claws are under the pins, slowly raise the 3 point hitch. Be sure each of the mounting pins seat in their respective claw.

f. Release the claw retainer locks to secure the mounting pins in the claws.

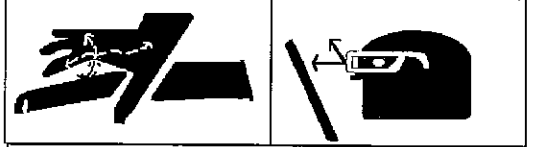
4. Attach the hydraulics:

a. Use a clean cloth or paper towel to clean the tips on the end of the hoses and the area around the couplers on the tractor.

b. Insert the male ends into the couplers on the tractor. Be sure they are locked in place.

c. Route the hoses along frame and secure in position with clips tape or plastic ties. Provide sufficient slack for turning.

WARNING



Use extreme care when working around a high-pressure hydraulic system. Make sure all connections are tight and all components are in good repair. Wear hand and eye protection when searching for suspected leaks.

5. Use the 3 point hitch to raise the front of the machine.

6. Unpin the frame stand. Raise and pin in its storage position.

7. Reverse the above procedure when unhooking from the tractor.

FIELD OPERATION

OPERATING SAFETY

1. Read and understand the Operator's Manual and all safety signs before operating, servicing, adjusting, repairing, unplugging, or filling.

2. Do not allow riders.

3. Install and secure all guards and shields before starting or operating.

4. Keep hands, feet, hair, and clothing away from moving parts.

5. Stop tractor engine, lower machine to the ground, place all controls in neutral, set park brake, remove ignition key, and wait for all moving parts to stop before servicing, adjusting, repairing, unplugging, or filling.

6. Place all tractor controls in neutral before starting.

7. Operate machine only while seated on the tractor seat.

8. Clear the area of bystanders, especially small children, before starting.

9. Keep all hydraulic lines, fittings, and couplers tight and free of leaks before using.

10. Clean reflectors, SMV, and lights before transporting.

11. Add extra lights and use pilot vehicle when transporting during times of limited visibility.

12. Use hazard flashers on tractor when transporting.

13. Review safety instructions with all operators annually.

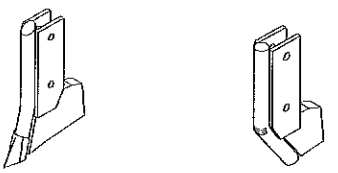
Bean Rod Operation

The Harriston Windrower-Rod Combination is designed to operate well in almost any soil and terrain condition. However, the operator has the responsibility of being familiar with all operating and safety procedures and following them. Some conditions may require the two components to be used separately. In heavy wet soil types or in conditions when excessive dirt stays on the roots of the plant, it is recommended that a Harriston Bean Cutter be used ahead of the windrower-rod.

1. Review and follow the Pre-Operation Checklist.
2. Attach the tractor to the machine (see page 15)
3. Before going to the field review transport section. (see page 20)

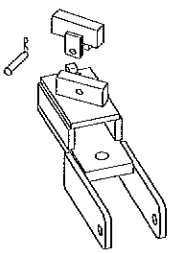
Shoes

Before operating the machine, determine the field conditions. Two types of shoes are available for the rod. The ripper type shoe is used in heavy soil with small or no rocks. This shoe will penetrate the hard soil and will help the rod stay at a consistent depth in most conditions. In fields with many rocks use the rock shoe to avoid damage to the machine.

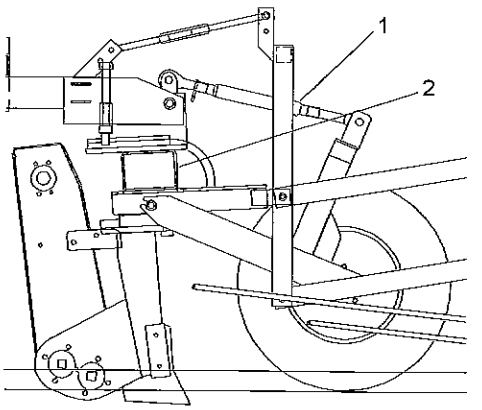


Spacer Blocks

In small or no rock and light soil conditions it is recommended that the C-shank spacer blocks be installed. In rocky or heavy soil it is recommended that the spacer blocks be removed. In some conditions where penetration is uneven it may help to install the spacer blocks on the shanks behind the tractor wheels only.



Bean Rod Depth



The depth of the rod is set by adjusting the turnbuckles on the support wheels (1). The front rod should be set so that it is just below ground level, or at a depth that it lifts all foliage without having the rod wrap with beans. Rear rod should be set so that it lifts foliage without wrapping. The rear rod lifts it from the ground and puts it on top, eliminating some soil. Front to rear height adjustment is made with the top 3-pt link on the tractor. The standard setting is when the rod tool bar is level or slightly down on the rear side (2). Never adjust the tool bar so that it is higher in the rear. After adjusting, readjust support wheels to keep front rod at proper depth. Avoid using bean rod deeper than necessary to lift foliage. Using the rod too deep will mix excess dirt in with bean foliage and cause unnecessary wear or damage to rod.

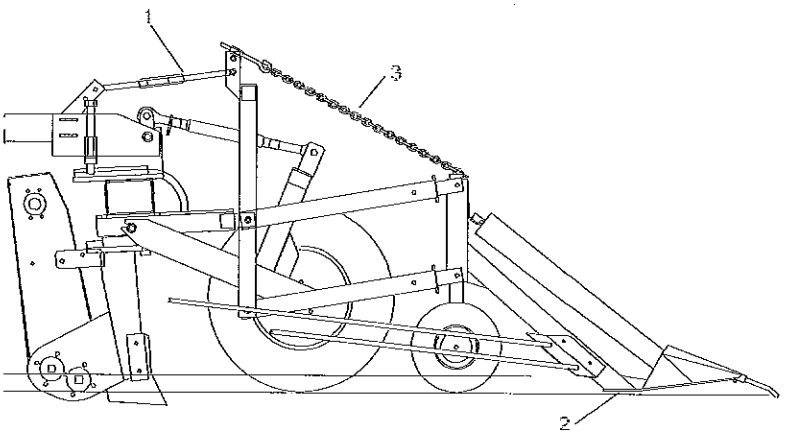
Rod Speed

WARNING

Never attempt to adjust or clean bean rod while it is operating.

The speed of the rods is set by the oil control on the tractor. Set the rod speed fast enough to lift and separate the plant from the soil. Excessive speed may shell beans, create unwanted vibration, and cause excessive wear on the machine.

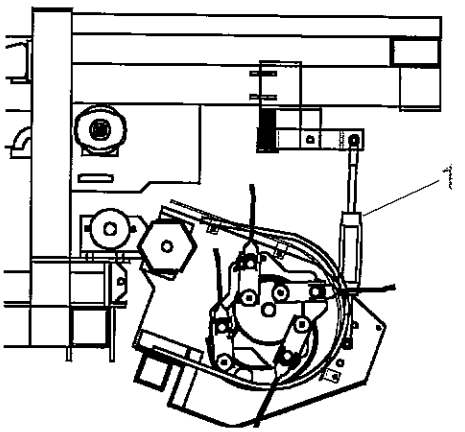
Divider Adjustment



Loosen the support chain. Adjust upper turnbuckle (1) so that wheel shank on divider is vertical. Adjust the divider support wheel so that the bottom of the divider shoe is approximately 1/2" to 3/4" off the ground (2). Adjust the divider point rod so rod is at ground level. Do not run divider point rod deeper than necessary as divider rod could cause the divider to "nose dive". Readjust support chain so that it has a slight amount of slack in the normal field position (3).

Pickup Height

Set pickup height with the turnbuckles on each side of the windrower (1). At normal height the pickup teeth slightly touch the ground. Having the teeth too low could put excess dirt in the windrow and damage pickup teeth. Setting pickup too high will leave beans in the field. There are three position holes if travel on turnbuckle is exceeded. Adjust turnbuckles the same on each end. At the top of the turnbuckle is a part that allows the pickup to move up over obstructions.

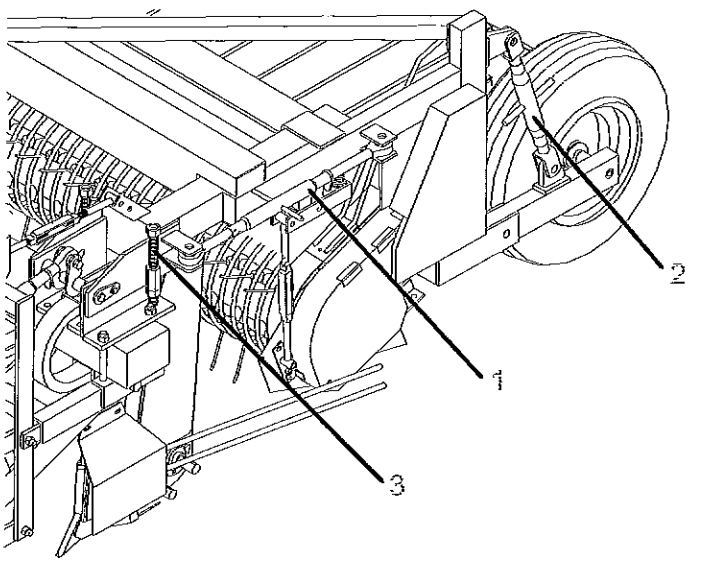


Pickup to Rod Distance

The pickup to bean rod distance is set with the large side turnbuckles (1). Under normal conditions the pickup is set as close as possible to the rod. This will reduce shelling and reduce foliage loss. Under excessive dirt conditions or when heavy green foliage is encountered, it may be desirable to move pickup back from bean rod. Make adjustments in small increments and adjust both sides evenly until desired distance is found.

Gauge Wheel Turnbuckle

The rear wheel turnbuckles are used to adjust height (2). Normally set the turnbuckles so that windrower is level. In loose soil conditions or in fields with large hills or beds, it may be necessary to raise the rear of the windrower to maintain clearance under the windrower frame. It is very important that the windrower frame does not push soil and debris, as this could cause damage to windrower pickup.

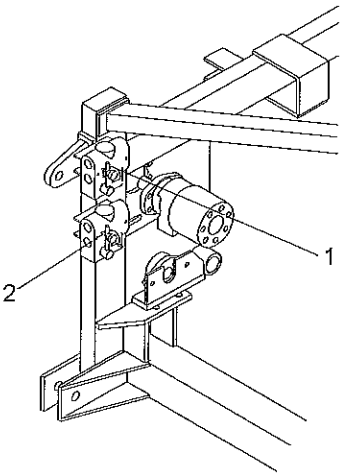


Pivot Adjusting Bolt

Located on the connecting arm are two 1" adjusting bolts. With the machine in normal operating position, set these bolts so that there is approximately 3/8" between the bottom of the bolt and the connecting bracket. This bolt clearance allows the rod and windrower to operate independently on uneven ground. It also allows the windrower to be raised when the rod is raised for transport. If there is not adequate clearance at the rear of windrower when machine is in raised position, it may be necessary to reduce the 3/8" clearance slightly.

Pickup Speed

The speed of the pickup is adjusted with the upper flow control (1) located on the left rear of the machine. Pickup speed is very critical to insure that the crop is properly handled and shelling is reduced to a minimum. When speed is properly set crop will flow smoothly from bean rod to draper. If speed is too slow pickup may push or roll crop. If speed is too fast pickup may pull windrow apart.

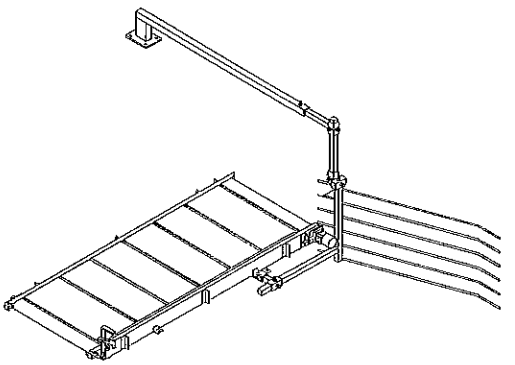


Draper Speed

The draper speed is adjusted with the lower flow control (2) located on the left rear of the machine. Set draper speed so that it is fast enough to clear crops from pickup but slow enough to avoid shelling.

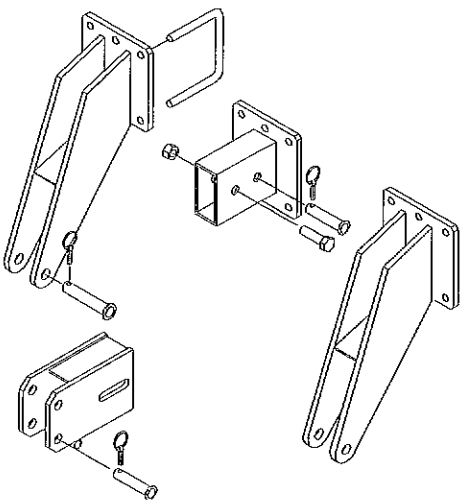
Rear Buncher

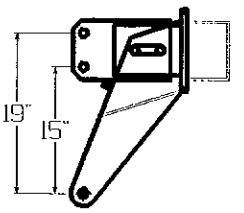
The buncher is used to get a more uniform shape or placement of the windrow. Adjustment is made by bending rods to achieve desired windrow. The buncher may be removed completely.



3-pt Hitch

Attach the 3-pt hitch to the front 5" x 7" front tube as shown. The center 3 pt attachment consists of two components connected together with a bolt and a pin. When windrower is in the operating position, with the support wheels firmly on the ground, remove pin from upper bracket. This is the pin closest to the frame. When windrower is in desired operating position adjust top link on tractor 3-pt until connecting pin is centered in the slot on the bracket. This allows the windrower to operate more effectively on uneven ground. It is recommended that the pin be replaced when transporting.





TRANSPORTING

When transporting the machine, review and follow these instructions:

1. Be sure all bystanders are clear of the machine.

2. Be sure that the machine is securely attached to the tractor, check that all retainers are installed on the pins and the 3 point claw locks are the locked position.

3. Clean the SMV emblem, lights and reflectors and be sure they are working.

4. Be sure you are in compliance with all applicable lighting and marking regulations when transporting. Check with your local authorities.

5. Be sure your machine can clearly be seen by overtaking and oncoming traffic.

TRANSPORT SAFETY

1. Make sure you are in compliance with all local regulations regarding transporting equipment on public roads and highways.

2. Make sure the SMV (Slow Moving Vehicle) emblem and all the lights and reflectors that are required by the local highway and transport authorities are in place, are clean, and can be seen clearly by all overtaking and oncoming traffic.

3. Do not allow anyone to ride on the Windrower or tractor during transport.

4. Do not exceed 20 mph. Reduce

6. Check the tire pressure in the tires. Be sure they are filled to their specified pressure.

7. Keep to the right and yield the right-of-way to allow faster traffic to pass. Drive on the road shoulder if permitted by law.

8. Do not allow riders

9. Always use hazard flashers on the tractor when transporting unless prohibited by law.

10. Use pilot vehicles front and rear when transporting during times of limited visibility.

11. Do not transport during darkness hours.

12. Never disengage tractor drivetrain and coast down hills. Always keep tractor in gear.

13. Never transport the machine faster than 20 mph. The ratio of the tractor weight to the windrower weight plays an important role in defining acceptable travel speed. See the following table.

Road Speed	Weight of fully equipped implement relative to weight of towing machine
up to 20 mph	1 to 1, or less
up to 10 mph	2 to 1, or less
do not tow	more than 2 to 1

STORAGE

After the season's use, the machine should be thoroughly inspected and prepared for storage. Repair or replace any worn or damaged components to prevent any unnecessary down time at the start of the next season. To insure a long, trouble free life, this procedure should be followed when preparing the unit for storage:

1. Store the unit in an area away from human activity.

2. Do not permit children to play on or around the stored machine.

3. Store the unit in a dry, level area. Support the base with planks if required

1. Clear the area of bystanders, especially small children.
2. Thoroughly wash the machine using a pressure washer to remove all dirt, mud, debris and residue.

3. Inspect the sections and tines for damage or entangled material. Repair or replace damaged parts. Remove all entangled material. Loosen canvas on drapers.

4. Inspect all hydraulic hoses, lines, couplers, and fittings. Tighten any loose fittings. Replace any hose that is badly cut, nicked, abraded or is separating from the crimped end of a fitting.

5. Lubricate all grease fittings. Make sure that all grease cavities have been filled with grease to remove any water residue from the washing.

6. Touch up all paint nicks and scratches to prevent rusting.

7. Move to storage area.

8. Select an area that is dry, level and free of debris.

9. Place planks under the stands and tires if required.

10. Unhook from tractor

11. Store the machine in an area away from human activity.

12. Do not allow children to play on or around the stored machine.

SERVICE AND MAINTENANCE

1. Use an SAE multi-purpose high temperature grease with extreme pressure (EP) performance. Also acceptable is an SAE Multi-purpose lithium based grease.

2. Storing Lubricants
Your machine can operate at top efficiency only if clean lubricants are used. Use clean containers to handle all lubricants. Store them in an area protected from dust, moisture and other contaminants.

Greasing

1. Use a hand-held grease gun for all greasing.

2. Wipe grease fitting with a clean cloth before greasing, to avoid injecting dirt and grit.

3. Replace and repair broken fittings immediately.

4. If fittings will not take grease, remove and clean thoroughly. Also clean lubricant passageway. Replace fitting if necessary.

Grease pickup bearings annually

Grease conveyor drive roller bearing annually

All other bearings are sealed bearings, which are non-greaseable.

Lubrication

Lubricate drive chain with LPS or similar product annually.

1. Follow all the operating, maintenance, and safety information in the manual.

2. Support the machine with blocks or safety stands when changing tires or working beneath it.

3. Stop tractor engine, lower machine to the ground, place all controls in neutral, set park brake, remove ignition key, and wait for all moving parts to stop before servicing, adjusting, repairing, unplugging, or filling.

4. Make sure all guards are in place and properly secured when maintenance work is completed.

5. Never wear ill-fitting, baggy, or frayed clothing when working around or on any of the drive system components.

6. Before applying pressure to a hydraulic system, make sure all lines, fittings, and couplers are tight and in good condition.

7. Relieve pressure from hydraulic circuit before servicing or disconnecting from tractor.

8. Keep hands, feet, hair, and clothing away from moving or rotating parts.

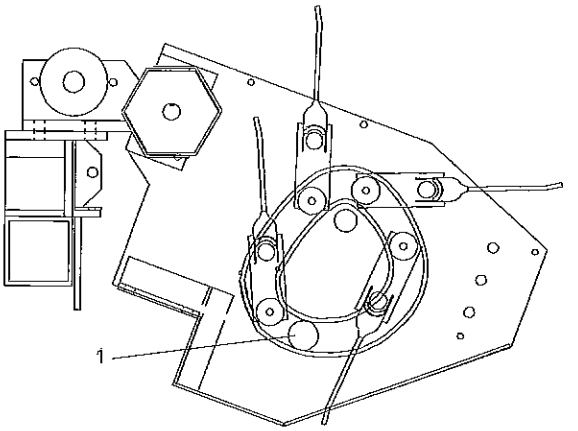
9. Clear the area of bystanders, especially small children, when carrying out any maintenance and repairs or making any adjustments.

10. Wear appropriate protective gear when contacting chemical handling components on machine.

Maintenance/Adjustment

Cams

Four cam bearings are located on each side of the machine. Check these bearings before use. Replace if necessary. A hole is provided for removal of the cam bearings (1). Check the path of the bearings for debris that might cause the cams to jam.

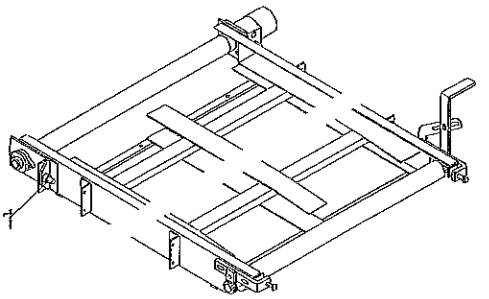


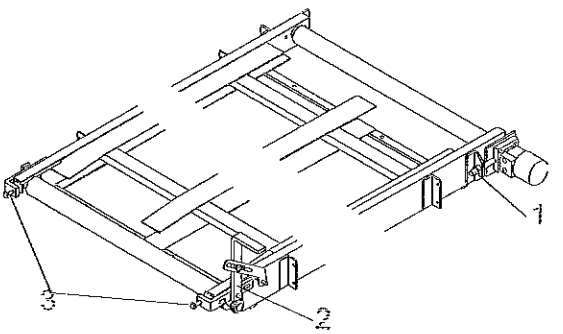
Draper

(1) These bolts are for adjusting the drive roller so the canvas will run straight. These bolts are not for adjusting tension.

(2) Use this handle to tighten the canvas. Loosen canvas when not in use. This will prevent damage to canvas and extend the operating life.

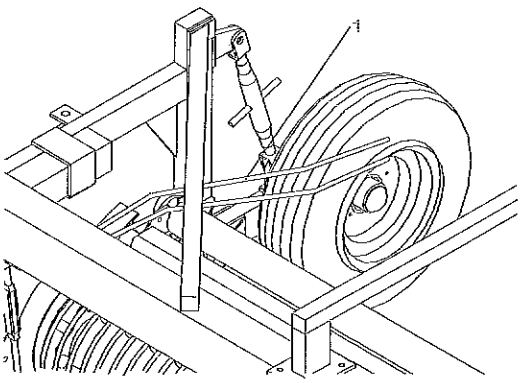
(3)These set screws are for adjusting the idle roller so the canvas will run straight.





Guide Rods

Bend these rods to improve the flow of the beans from the rollers to the draper. These rods also keep the beans away from the gauge wheel.

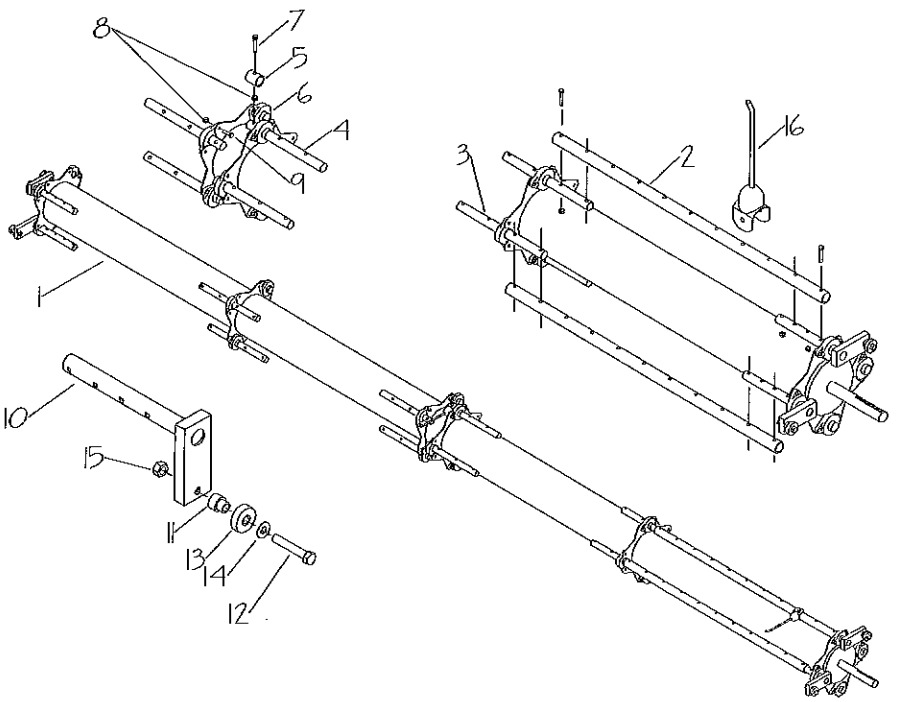


Excessive Crop Loss	Pickup running too fast	Reduce machine speed by adjusting oil flow
	Ground speed too slow	Increase ground speed
	Distance between bean rod and windrower too wide	Set windrower closer to rod
Too much dirt in Windrow	Rod running too deep	Decrease depth of rod
	Ground speed too fast	Decrease speed
	Bean rod set too close to windrower	Increase distance
	Front rod too deep	Change angle with top 3 point link
Excessive Wrapping	Foliage too green	Wait for foliage to dry; spray to kill foliage
	Rod running too shallow	Set rod deeper
	Front rod running too deep	Adjust rod depth
Too Many Beans Left on Ground	Bean rod running too shallow	Adjust rod depth
	Windrower pickup too high	Adjust pickup height
	Pickup running too slow	Increase speed of pickup
	Ground speed too fast	Decrease ground speed
	Distance between rod and windrower to wide	Decrease distance
Hydraulic Power Loss	Inadequate tractor hydraulics	See hyd. requirements
	Ground Speed too fast	Decrease speed

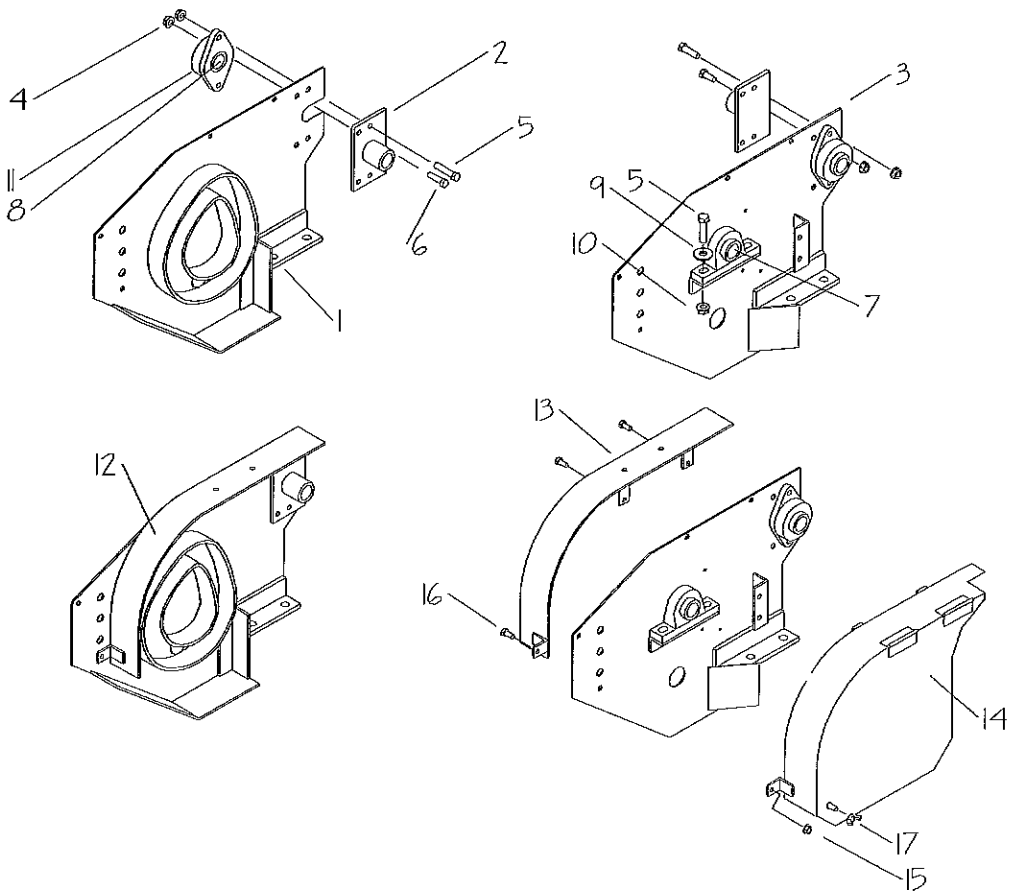
In some conditions it is advisable to remove the top bean rod. This is particularly important in very hard ground or in rocky conditions. This allows you to run the front rod much shallower. This also reduces the possibility of foliage wrapping on the rod and reduces the power requirements.

In some conditions it is advisable to precut beans using a Harriston Bean Cutter or similar machine. This will help in many adverse conditions.

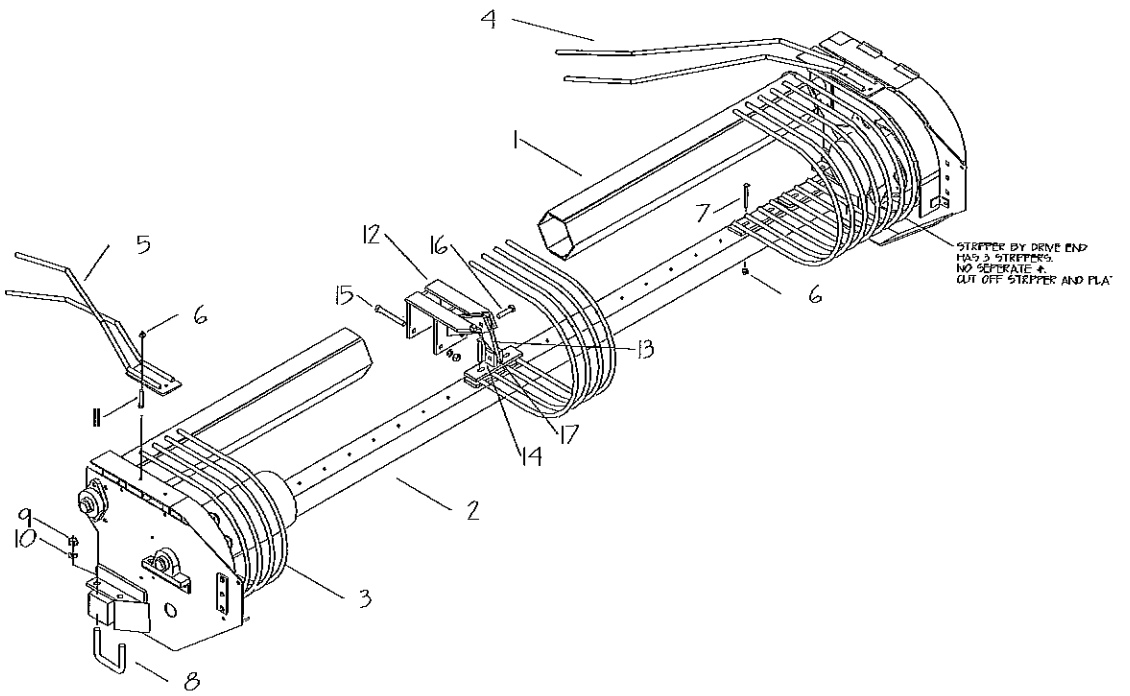
PICKUP ASSEMBLIES



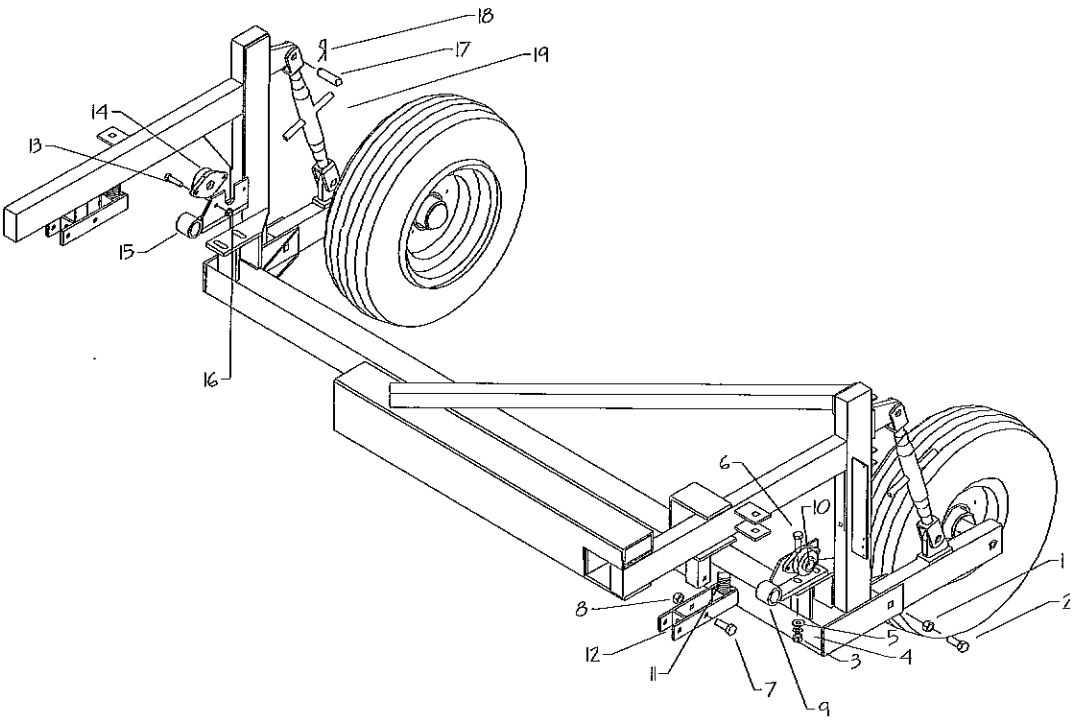
REF.	PART NO.	DESCRIPTION
	561010	6 Row 30" Pickup Assembly (181" Long)
	561015	8 Row 30" Pickup Assembly (241" Long
	561017	12 Row 22" Pickup Assembly (265" Long)
1	561040	Pickup Tube Weldment 6R30 181"
	561050	Pickup Tube Weldment 8R30 241"
	561055	Pickup Tube Weldment 12R22 181"
2	561021	41 1/2" Tooth Pipe (6R30)
	561020	53 1/2" Tooth Pipe (8R30)
	561022	61 1/2" Tooth Pipe (12R22)
3	561032	Coupler Shaft - 13" Long
4	561033	Coupler Shaft - 11 1/2" Long
5	561023	Pipe - 1 Tooth
6	095248	1" Bearing SBLF 205-16
7	020130	5/16" x 1 3/4" Bolt
8	020479	5/16" Flange Nut
9	020016	5/16" x 1" Bolt
10	562045	Cam Weldment 9 3/4" Long - 6R30
	562040	Cam Weldment 15 3/4" Long - 8R30
	562050	Cam Weldment 11 3/4" Long - 12R22
11	350415	Trip Arm Spacer '95
12	095105	1 9/16" O.D. Cam Bearing
13	020042	7/16" x 2" Bolt
14	020520	7/16" Flat Washer 15/16" O.D.
15	020448	7/16" Jam Nut
16	095255	Pickup Tooth



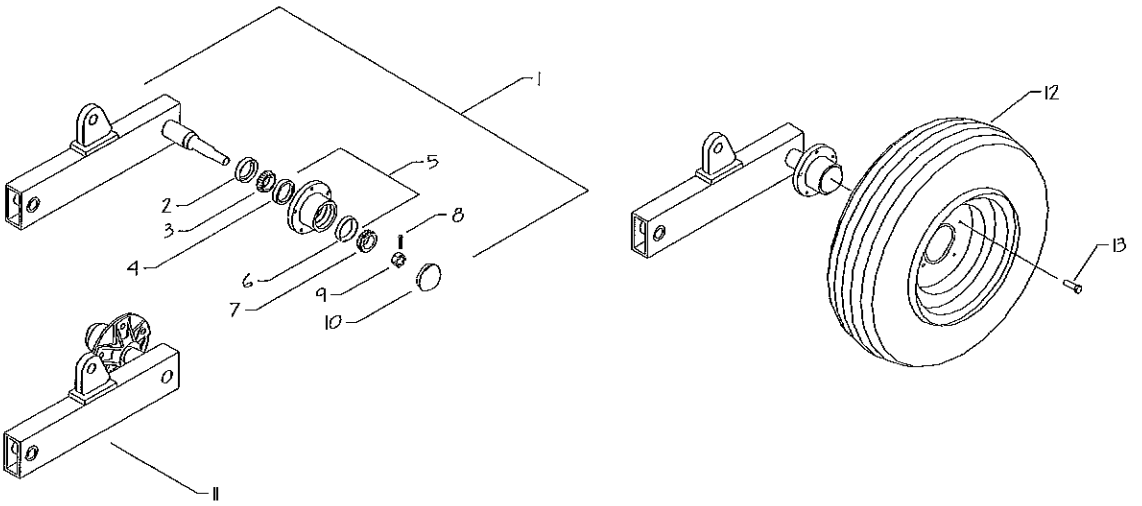
REF.	PART NO.	DESCRIPTION
1	562155	Cam Weldment Right 1997
2	561130	Inner Bushing Weldment
3	562150	Cam Weldment Left 1997
4	020481	7/16" Flange Nut
5	020041	7/16" x 1 1/2" Bolt
6	020043	7/16" x 1" Bolt
7	094040	1 1./4" Pillow Block Assy. Narrow
8	082041	1 1/4" LT Shere Sealed Bearing
9	020514	7/16" Flat Washer
10	020481	7/16" Flange Nut
11	082203	2 Bolt Flange Housing 5663-062MM
12	562190	Cam Shield Weldment Right
13	562195	Cam Shield Weldment Left
14	562200	Lower Pickup Drive Shield
15	020471	3/8" Flange Nut
16	020111	3/8" x 7/8" bolt
17	020495	3/8" Wing Nut



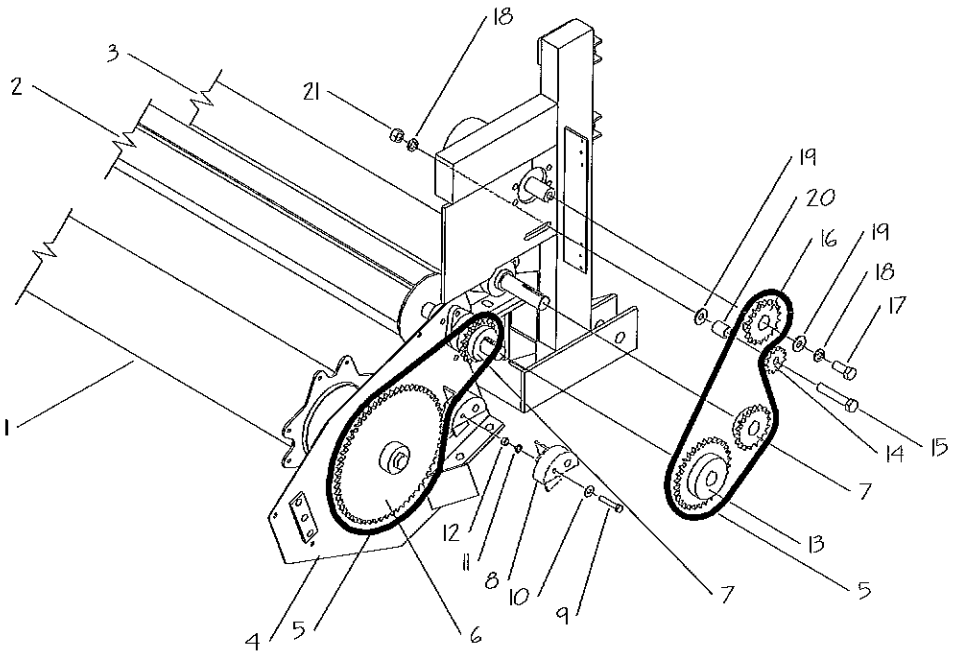
REF.	PART NO.	DESCRIPTION
1	561170	6 Row 30" Hex Roller Weldment 181"
	561175	8 Row 30" Hex Roller Weldment 241"
	561180	12 Row 22" hex Roller Weldment 265"
2	561320	Stripper Tube - 195" (6 row 30")
	561321	Stripper Tube - 254" (8 row 30")
	561322	Stripper Tube - 278" (12 row 22")
3	561325	Stripper Weldment
4	561348	Bean Guide Rod Weldment Left
5	561344	Bean Guide Rod Weldnent Right
6	020471	3/8" Flange Nut
7	020633	3/8" x 4" Carriage Bolt
8	021007	5/8" x 3" x 4 1/2" U-bolt
9	020404	1/2" Nut
10	020504	1/2" Lock Washer
11	020029	3/8" x 1" Bolt
12	562540	Upper Brace
13	562555	Brace Strap Flat
14	562550	Lower Stripper Brace Weldment
15	020061	1/2" x 5 1/2" Bolt
16	020052	1/2" x 1 1/2" Bolt
17	020425	1/2" Lock Nut



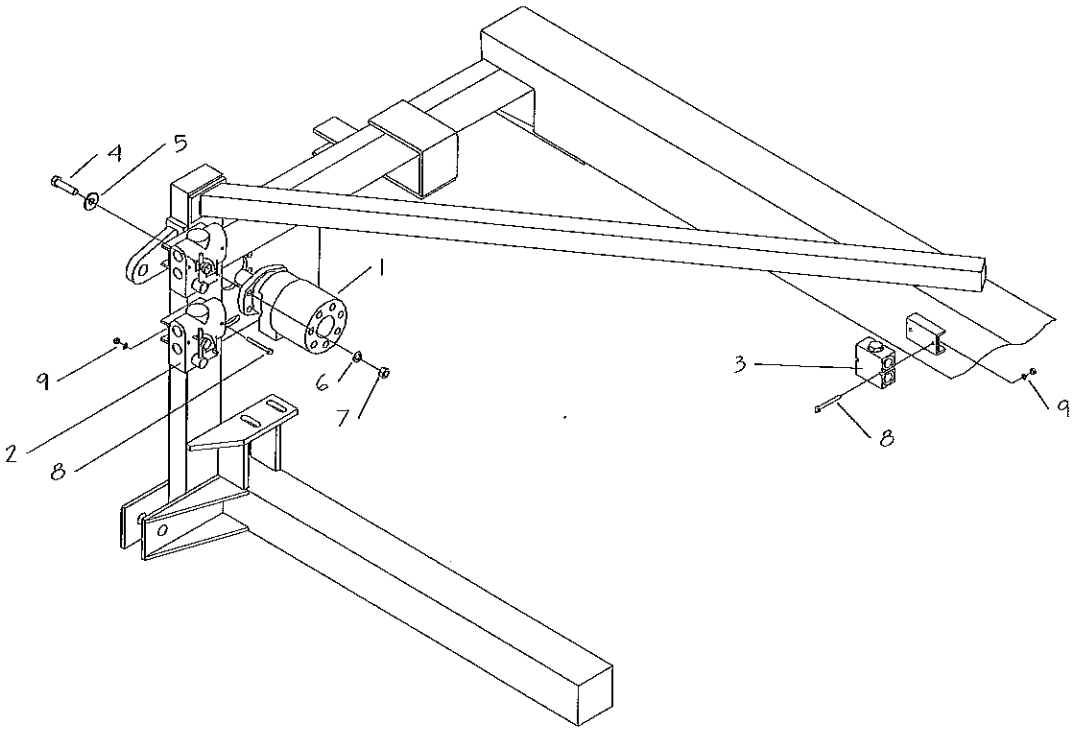
REF.	PART NO.	DESCRIPTION
1	020430	1" Centerlock Nut
2	020104	1" x 4" Bolt
3	020406	5/8" Nut
4	020506	5/8" Lock Washer
5	020536	5/8" Flat Washer
6	020065	5/8" x 2" Bolt
7	020068	5/8' x 3 1/2" Bolt
8	020434	5/8" Nylock Nut
9	562315	4" Roller Support Weldment Left
10	082041	1 1/4" Bor LT Spere Sealed Bearing
11	021506	Disc Opener Spring 1997-4" Long
12	562340	Turnbuckle Pivot Weldment
13	020041	7/16" x 1 1/2" Bolt
14	082203	2 bolt Flange Housing 5663-062MM
15	562320	4" Roller Support Weldment Right
16	020471	7/16" Flange Nut
17	020898	1" x 3" Clevis Pin
18	020915	3/16" Hair Pin
19	021202	Turnbuckle with Yoke



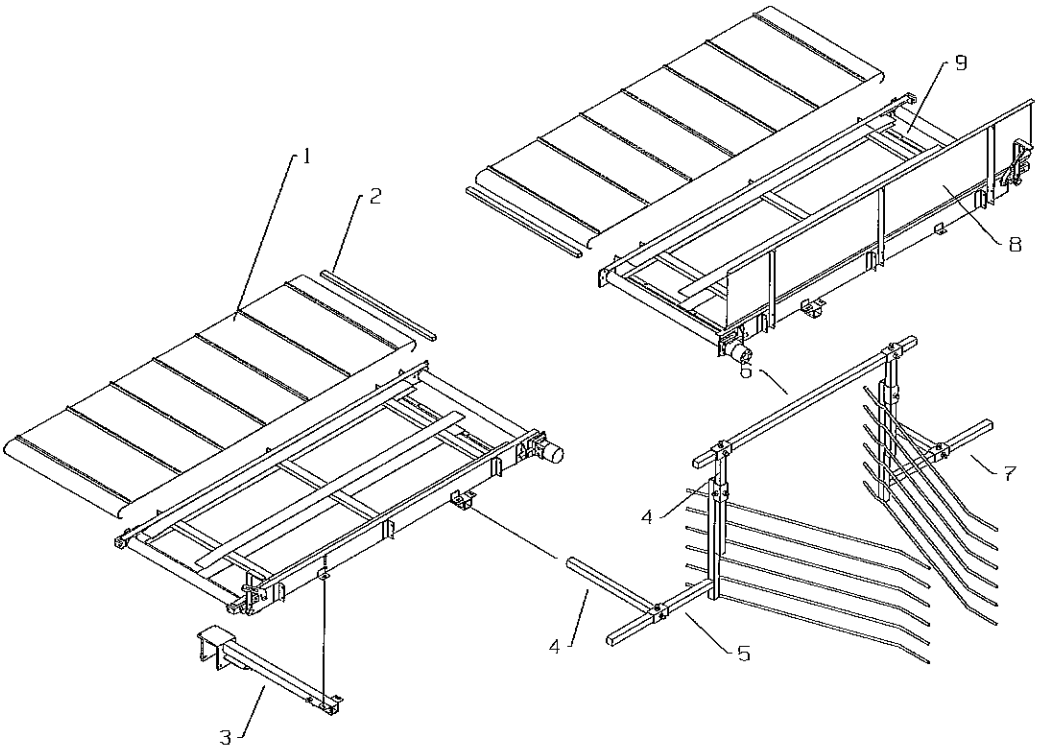
REF.	PART NO.	DESCRIPTION
1	562305	Right Gauge Wheel Arm
2	095025	SE-11 Seal
3	095020	Tapered Bearing LM 67048 Cone
4	095069	Bearing Cup LM 67101 (replacement)
5	090012	HA511 Hub with Cup
6	095070	Bearing Cup 3/4" - LM11910 (replacement)
7	095019	Tapered Bearing LM 11949 Cone
8	020827	5/32" x 1" Cotter Pin
9	090009	1.625 x 10 Spindle with Nut
10	090013	DC 12 Dust Cap (Planter)
11	562300	Left Gauge Wheel Arm
12	223700	Tire Rim Assembly
13	021400	WB 10 Wheel Bolt



REF.	PART NO.	DESCRIPTION
1	561010	6 Row 30" Pickup Assembly
	561015	8 Row 30" Pickup Assembly
	561017	12 Row 22" Pickup Assembly
2	561170	6 Row 30" Hex Roller Weldment - 181"
	561175	8 Row 30" Hex Roller Weldment - 241"
	561180	12 Row 22" Hex Roller Weldment - 265"
3	561150	6 Row 30" - 4" roller Weldment 181"
	561155	8 Row 30" - 4" Roller Weldment 241"
	561160	12 Row 22" - 4" Roller Weldment 265"
4	562150	Cam Weldment Left 1997
	562155	Cam Weldment Right 1997
5	560031	#50 Roller Chain
6	560032	5060 Welded Sprocket
7	095258	5018 x 1.25 Finished Bore-Hard 2SS
8	365257	Plastic tightener
9	020134	3/8" x 2 1/2" bolt
10	020513	3/8" Flat Washer
11	020502	3/8" Lock Washer
12	020402	3/8" Nut
13	095260	5030 x 1.25 Fin Bore-Hard 2SS
14	081219	5013 Idler Sprocket 5/8"
15	020068	5/8" x 3 1/2" Bolt
16	095259	5020 x 1.25 Fin Bore-Hard 2SS
17	020127	5/8" x 1 1/2" Bolt
18	020506	5/8" Lock Washer
19	020536	5/8" Flat Washer
20	560033	Idler Spacer 1 1/4" Long
21	020406	5/8' Nut

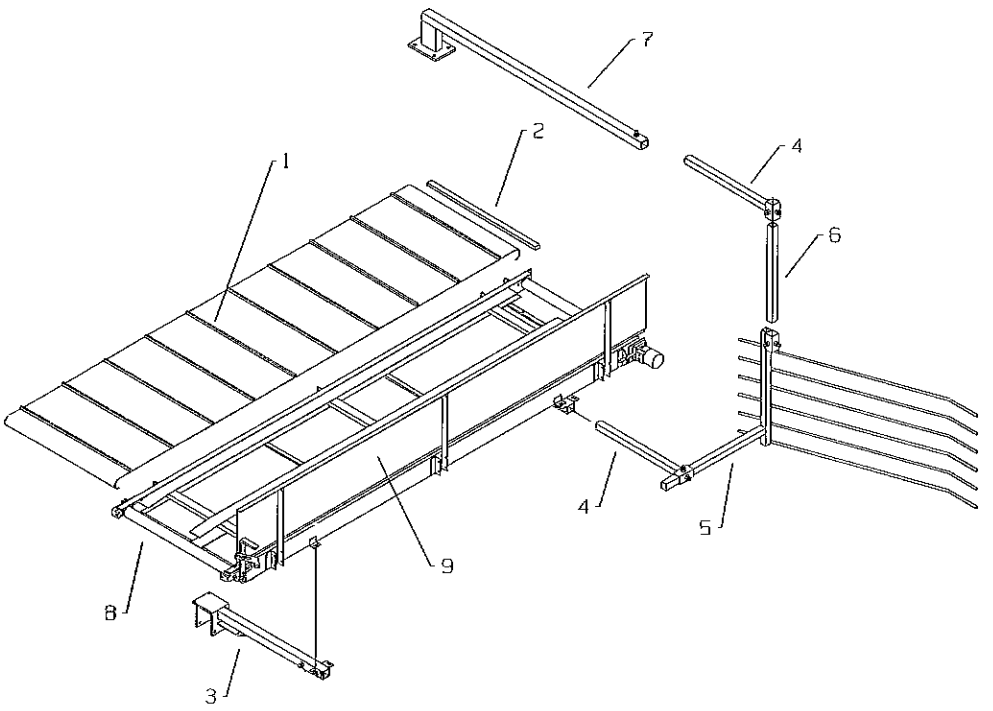


REF.	PART NO.	DESCRIPTION
1	095224	1 1/4" Motor MB06103AAAA
2	095253	Flow Control Valve (#10) Windrower
3	095257	Over-Running Hydraulic Valve
4	020053	1/2" x 2" Bolt
5	020515	1/2" Flat Washer
6	020504	1/2" Lock Washer
7	020404	1/2" Nut
8	020006	1/4" x 2 1/2" Bolt
9	020500	1/4" Lock Washer
	020400	1/4" Nut



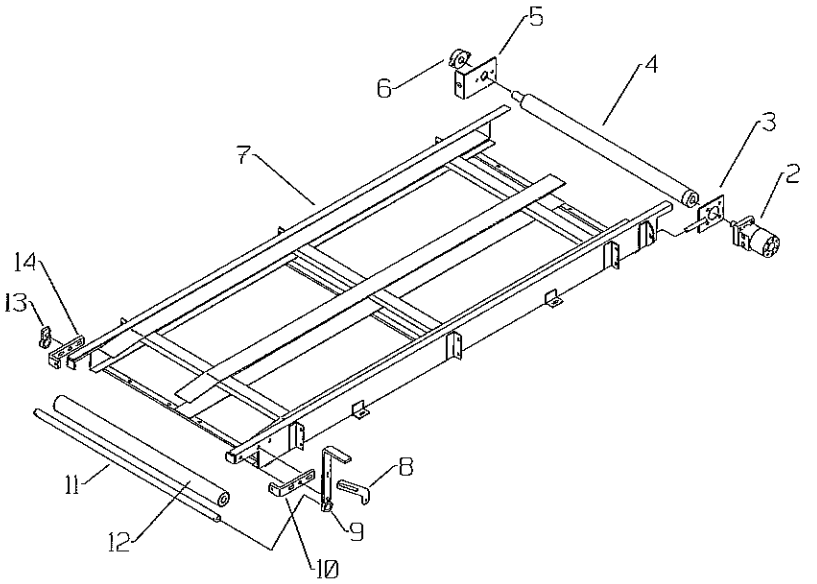
561740	6-30 Center Delivery Package - 60" lg
561750	8-30 Center Delivery Package - 86" lg
561770	12-22 Center Delivery Package - 98" lg

REF.	PART NO.	DESCRIPTION
1	095214	32" Bean Windrower Belting
2	095215	32" Tie Bar Connector
3	561490	Conveyor Mount Arm Weldment
4	562410	Slide Arm Weldment
5	562400	Shaper Weldment Left
6	562415	Horizontal Slide Tube
7	562405	Shaper Weldment Right
8	561520	6-30 C.D. Backstop Weldment
	561810	8-30 C.D. Backstop Weldment 86" lg
	561825	12-22 C.D. Backstop Weldment 98" lg
9	561520	6-30 C.D. Conveyor Assembly 60" lg
	561800	8-30 C.D. Conveyor Assembly 86" lg
	561815	12-22 C.D. Conveyor Assembly 98" lg



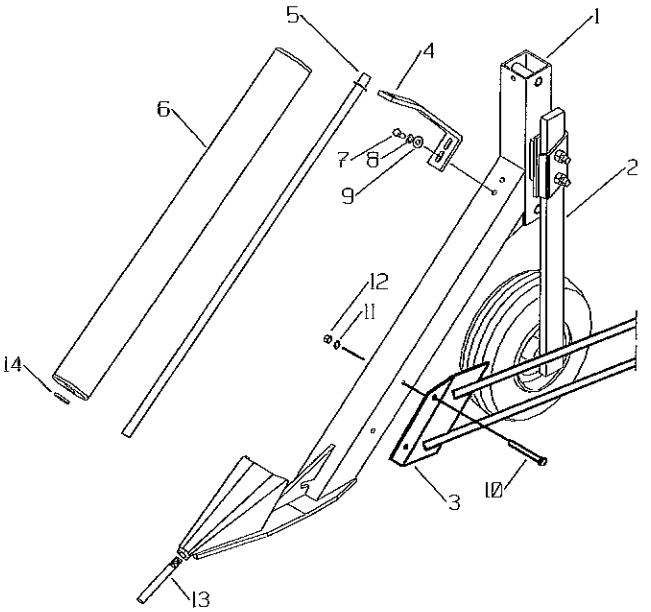
561730	6-30 End Delivery Package - 120" lg
561760	8-30 End Delivery Package - 172" lg
561780	12-22 End Delivery Package - 196" lg

REF.	PART NO.	DESCRIPTION
1	095214	32" Bean Windrower Belting
	095265	42" Windrower Belting (8 row 30 & 12 row 22)
2	095215	32" Tie Bar Connector
	095266	41 3/4" Tie Bar Connector (8 row 30 & 12 row 22)
3	561490	Conveyor Mount Arm Weldment
	562600	42" Conveyor Mount Arm Weldment
4	562410	Slide Arm Weldment
5	562400	Shaper Weldment Left
6	562430	Vertical Tube 20" long
7	562425	Shaper Support Weldment
8	561500	6-30 E.D. Conveyor Assembly 120" lg
	561665	8-30 E.D. Conveyor Assembly 172" lg
	561830	12-22 E.D. Conveyor Assembly 196" lg
9	561550	6-30 E.D. Backstop Weldment 120" lg
	561670	8-30 E.D. Backstop Weldment 172" lg
	561840	12-22 E.D. Backstop Weldment 196" lg

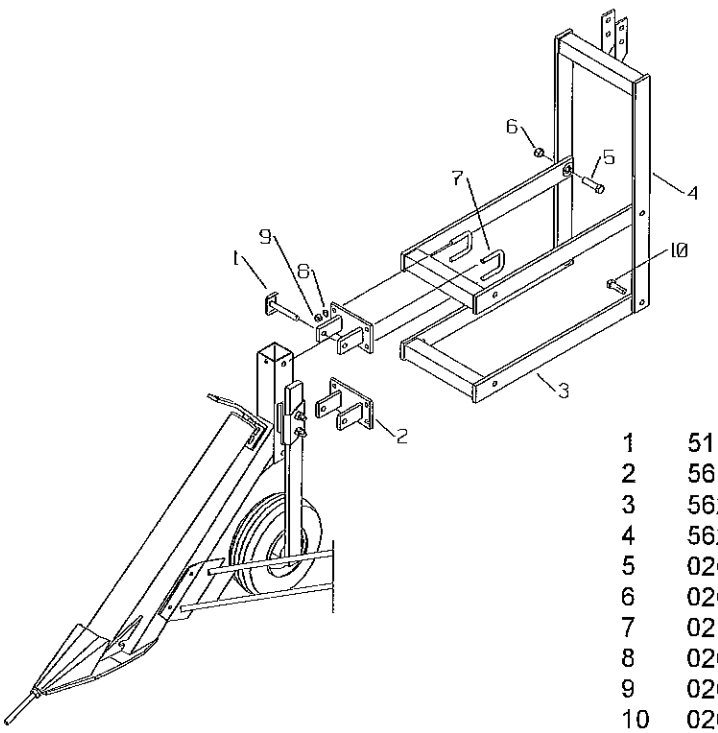


	561505	6-30 C.D. Conveyor Assy.- 60"
	561800	8-30 C.D. Conveyor Assy.- 86"
	561815	12-22 C.D. Conveyor Assy.- 98"
	561500	6-30 E.D. Conveyor Assy. 120" lg
	561665	8-30 E.D. Conveyor Assy. 172" lg
	561830	12-22 E.D. Conveyor Assy. 196" lg

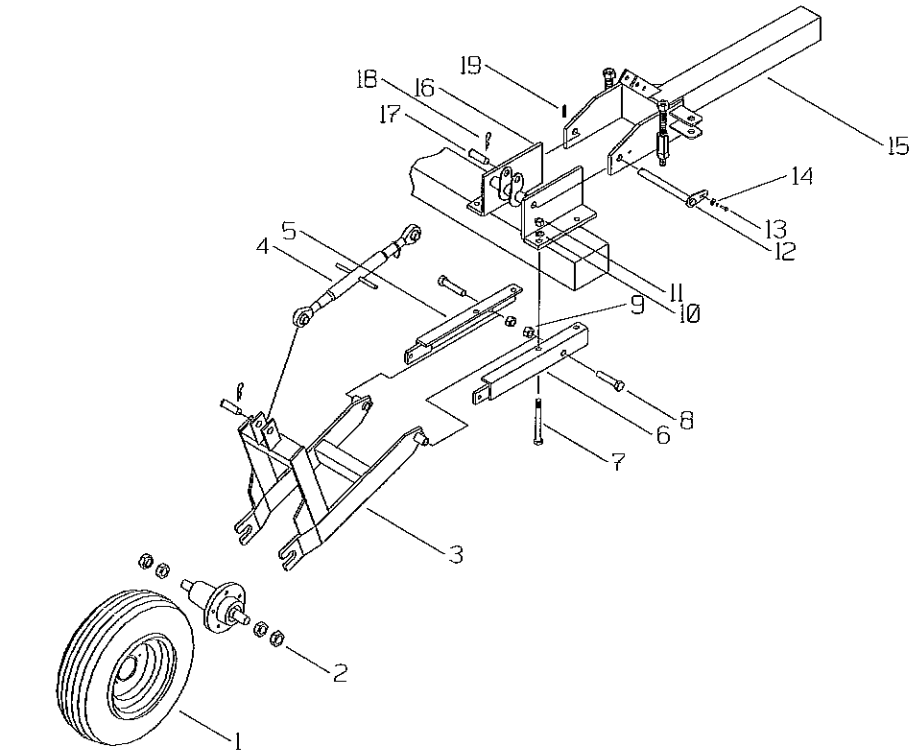
REF.	PART NO.	DESCRIPTION
2	095225	1" 4 bolt motor MG021313AAA
3	561575	Hyd. Motor Mount Weldment
4	561560	Conveyor Roller Weldment- Drive
	562630	Conveyor Roller Weldment - 42"
5	561570	Bearing Plate - Drive Roller
6	095248	SBLF 205-16 Assy. (1")
7	561510	6-30 C.D. Conveyor Weldment - 60"
	561805	8-30 C.D. Conveyor Weldment - 86"
	561820	12-22 C.D. Conveyor Weldment - 98"
	561530	6-30 E.D. Conveyor Weldment 120" lg
	561660	8-30 E.D. Conveyor Weldment 172" lg
	561835	12-22 E.D. Conveyor Weldment 196" lg
8	561591	Tightener Lock Strap
9	561580	Roller Tightener Handle Weldment
10	561590	Roller Adjustment Flat
11	561597	Driven Roller Shaft
	562621	Driven Roller Shaft 45 1/16"
12.	561565	Idle Roller Assembly
	562620	Idle Roller Assembly 42"
13.	561585	Roller Tightener Weldment Short
14.	561590	Roller Adjustment Flat



1	510370	Divider Weldment
2	510425	Gauge Wheel Assy.
3	502000	Divider Rod Right
	501900	Divider Rod Left
4	510525	Upper Roller Mount 98
5	510540	36" Roller Shaft 3/4" CR
6	510430	32 5/8" Roller Assembly
7	020029	3/8" x 1" Bolt
8	020502	3/8" Lock Washer
9	020513	3/8" Flat Washer
10	020034	3/8" x 4" Bolt
11	020502	3/8" Lock Washer
12	020402	3/8" Nut
13	510146	Divider Point Bolt
14	021313	3/4" Narrow 14 Ga



1	510400	Row Divider Pin 96
2	561645	Divider Mount Weldment
3	562530	Divider Linkage Weldment
4	562520	Divider Yoke Weldment
5	020066	5/8" x 2 1/2" Bolt
6	020427	5/8" Center Lock Bolt
7	021000	1/2" x 2" x 3" U-bolt
8	020504	1/2" Lock Washer
9	020404	1/2" Nut
10	020065	5/8" x 2" bolt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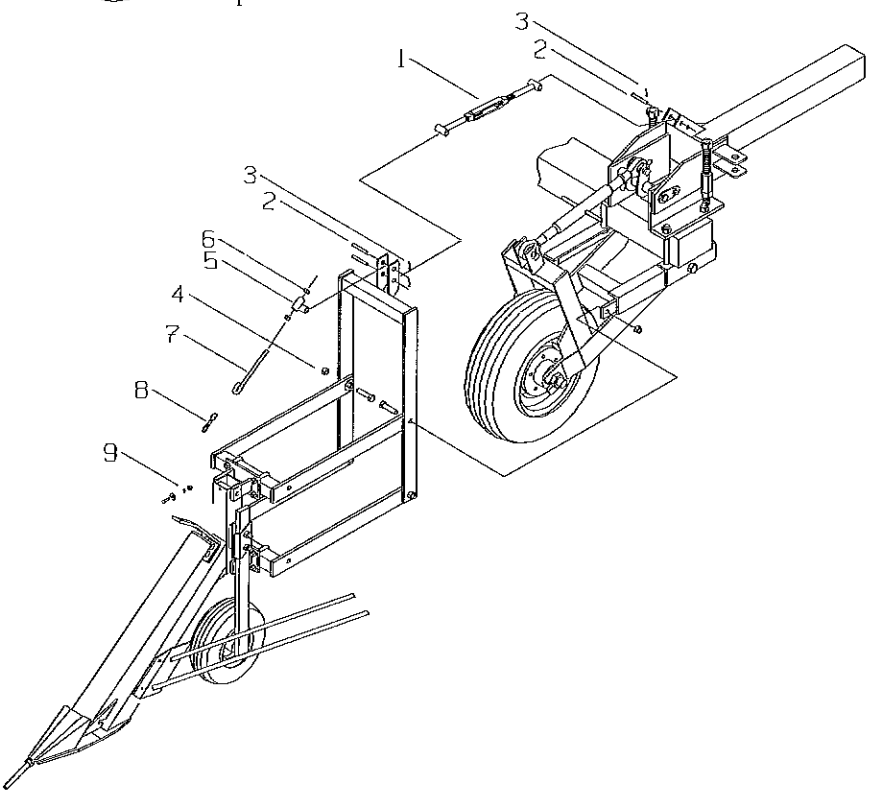
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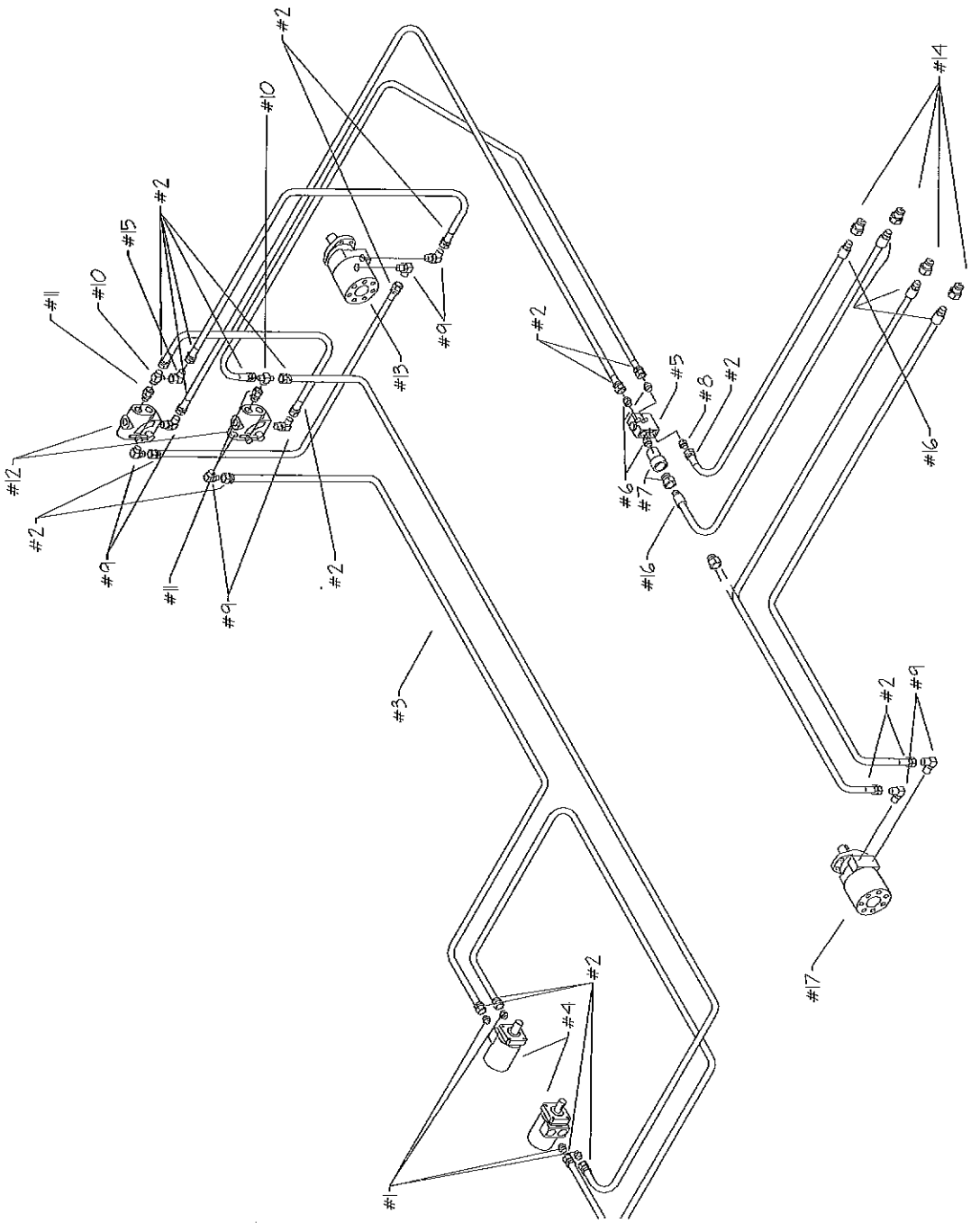
REF.	PART NO.	DESCRIPTION
1	223710	Tire Rim Assy. 6" Rim 760-15
2	127600	Spindle Assembly
3	561630	Gauge Wheel Yoke Weldment
4	096200	Turnbuckle with Eye
5	562515	Wheel Mount Weldment Right
6	562510	Wheel Mount Weldment Left
7	020090	3/4" x 7" bolt
8	020097	7/8" x 4" Bolt
9	020429	7/8" Lock Nut
10	020507	3/4" Lock Washer
11	020407	3/4" Nut
12	561600	Windrower Pivot Mount Pin
13	020028	3/8" x 3/4" Bolt
14	020513	3/8" Flat Washer
	020502	3/8" Lock Washer
15	561610	Windrower Lift Tube Weldment Left
	561620	Windrower Lift Tube Weldment Right
16	561625	Windrower Toolbar Mount Weldment
17	020989	1 x 3" Cylinder Pin
18	020915	3/16" Hair Pin

REF.	PART NO.	DESCRIPTION
1	220400	Gauge Wheel Adj. Turnbuckle
2	020896	Clevis Pin 5/8" x 3"
3	020914	.148 Bridge Pin
4	020066	5/8" x 2 1/2" Bolt
	020427	5/8" Lock Nut
5	562535	Eyebolt Mount Weldment
6	020404	1/2" Nut
7	300700	1/2" x 8" Eyebolt
8	562536	40" of 1/4" Chain
9	020029	3/8" x 1" bolt
	020513	3/8" Flat Washer
	020502	3/8" Lock Washer
	020402	3/8" Nut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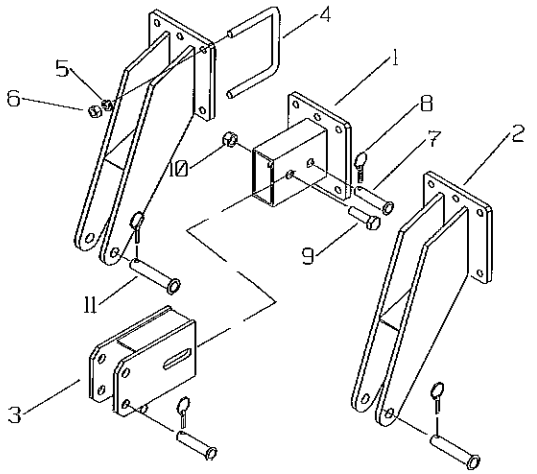
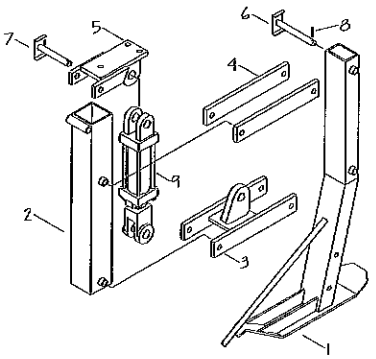
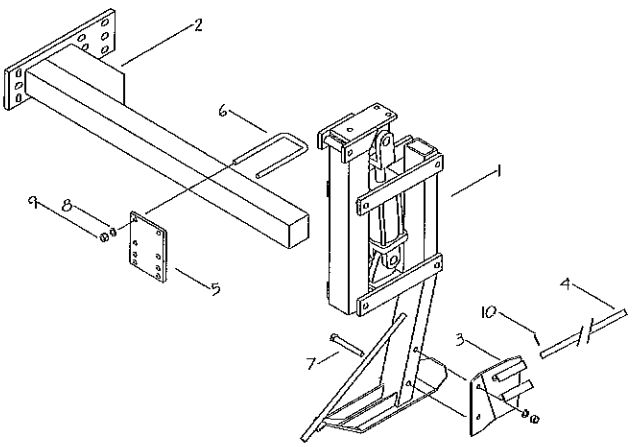
REF.	PART NO.	DESCRIPTION
1	096161	Male Jic 7/8-14 - 1/2 NPTF
2	095275	7/8-14 JIC Swivel Female 1/2 Hose
3	095009	1/2" 1 Wire Hose
4	095225	1" 4 Bolt Motor MG021313AAA
5	095257	Over Running Hyraulic Valve
6	095271	Male Jic-Male ORB Connector
7	095194	Complete Coupler 4000-15P
8	095193	#10 ORB Male - #8 ORB Male
9	095273	Male JIC-Male ORB 90 Elbow
10	095276	Male JIC 37 (7/8-14) Tee
11	095270	Male ORB - Female Swivel JIC
12	095253	Flow Control Valve #10
13	095224	1 1/4" Motor MB06103AAAA
14	095195	S71-15P Male Tip 3/4-16
15	095274	Male Jic - Female Jic Swivel Elbow
16	095277	ORB 3/4-16 Solid 1/2 Hose End
17	095226	1998 Rod Motor ME120103AAAA



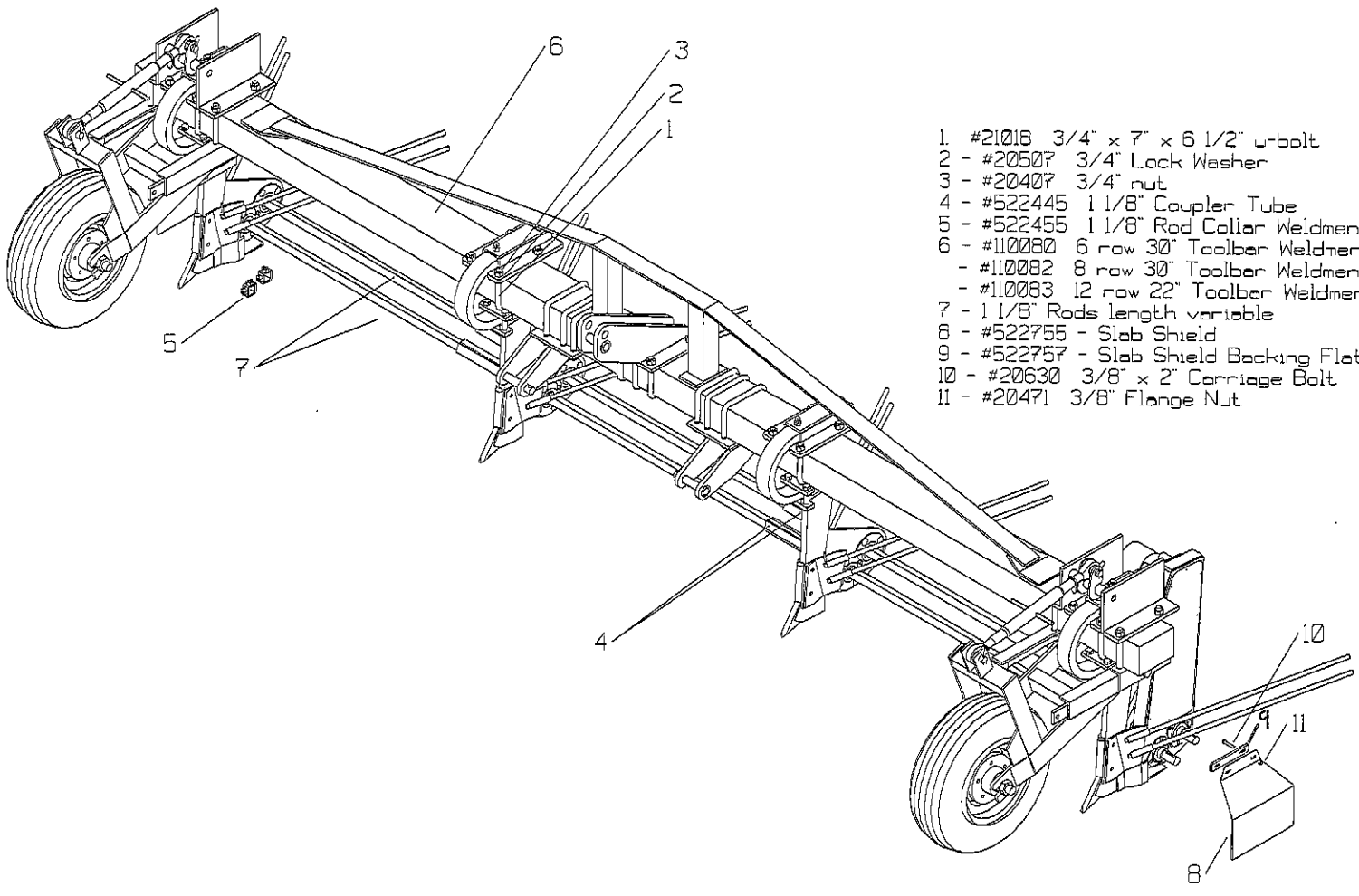
REF.	PART NO.	DESCRIPTION
1	561865	Upper 3 pt Link
2	561875	Lower Long 3 Point Ear
3	561870	Floating Link Weldment
4	021018	3/4" x 7" x 6 1/2" U-bolt
5	020507	3/4" Lock Washer
'6	020407	3/4" Nut
7	220900	Top 3 pt Pin
'8	095032	7/16" Lynch Pin
9	020106	1" x 5" Bolt
10	020430	1" Lock Nut
11	220800	Lower 3 pt Pin



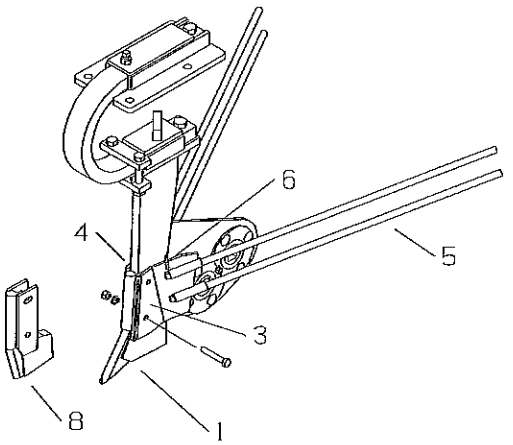


REF.	PART NO.	DESCRIPTION
1	503235	Rear Tire Divider Weldment
2	503240	Front Parallel Tube Weldment
3	503245	Lower Parallel Linkage
4	503248	Linkage Flat Painted
5	503250	Upper Cylinder Mount Weldm
6	503255	Tire Divider Pin
7	510400	Row Divider Pin
8	020958	3/16" x 1 1/4" roll Pin
9	095123	2" x 4" Cylinder 2500 psi

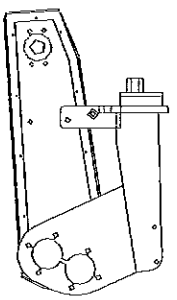
REF.	PART NO.	DESCRIPTION
1	503230	Rear Tire Divider Assy.
2	503260	Standard Divider Mount
3	522650	Divider Mount Left Weldment
	522650	Divider Mount Right Weldmen
4	520398	Shoe Rod with Hole 1997
5	503700	Unviersal Bar Mount Plate
6	021004	1/2" x 3" x 7 1/4" u-bolt
7	020058	1/2" x 4" Bolt
8	020504	1/2" Lock Washer
9	020404	1/2" Nut
10	020965	1/4" x 1 1/2" roll pin

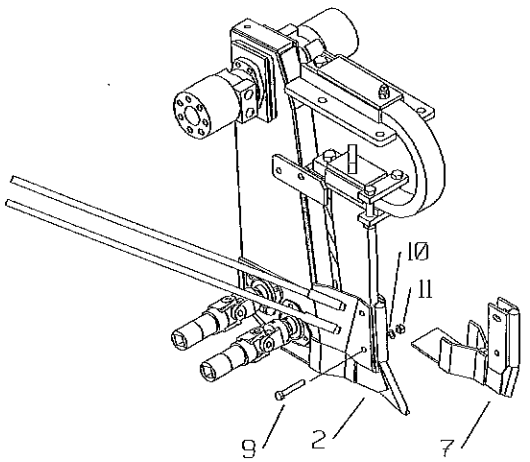


1. #21018 3/4" x 7" x 6 1/2" u-bolt
2 - #20507 3/4" Lock Washer
3 - #20407 3/4" nut
4 - #522445 1 1/8" Coupler Tube
5 - #522455 1 1/8" Rod Collar Weldment
6 - #110080 6 row 30" Toolbar Weldment 200"
- #110082 8 row 30" Toolbar Weldment 260"
- #110083 12 row 22" Toolbar Weldment 284"
7 - 1 1/8" Rods length variable
8 - #522755 - Slab Shield
9 - #522757 - Slab Shield Backing Flat
10 - #20630 3/8" x 2" Carriage Bolt
11 - #20471 3/8" Flange Nut

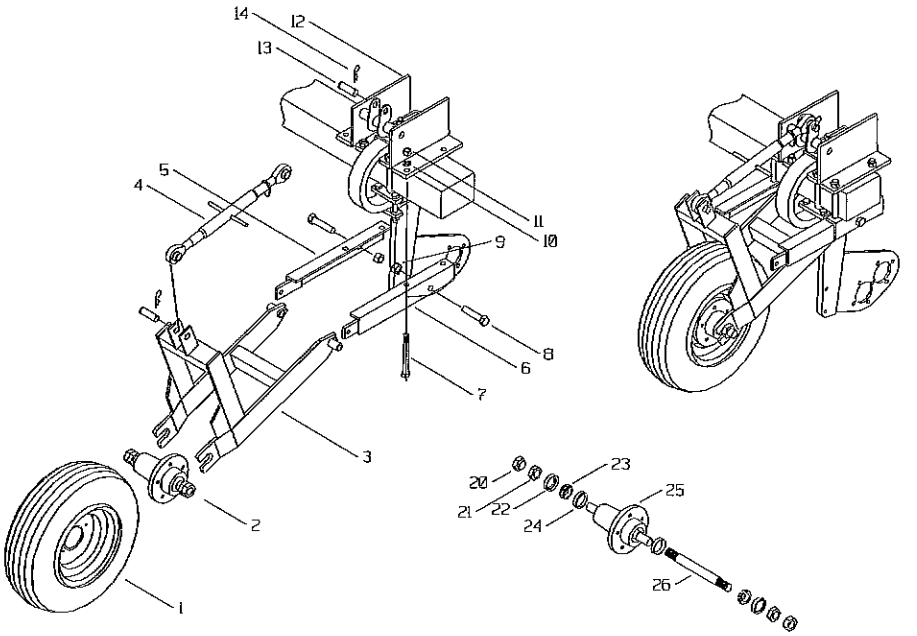


1	522600	Shoe Weldment 1997 (Point)
2	522610	Gearbox Shoe Weldment 1997 (Point)
3	522650	Divider Mount Weldment Left
4	522655	Divider Mount Weldment Right
5	520398	Shoe Rod with Hole 1997

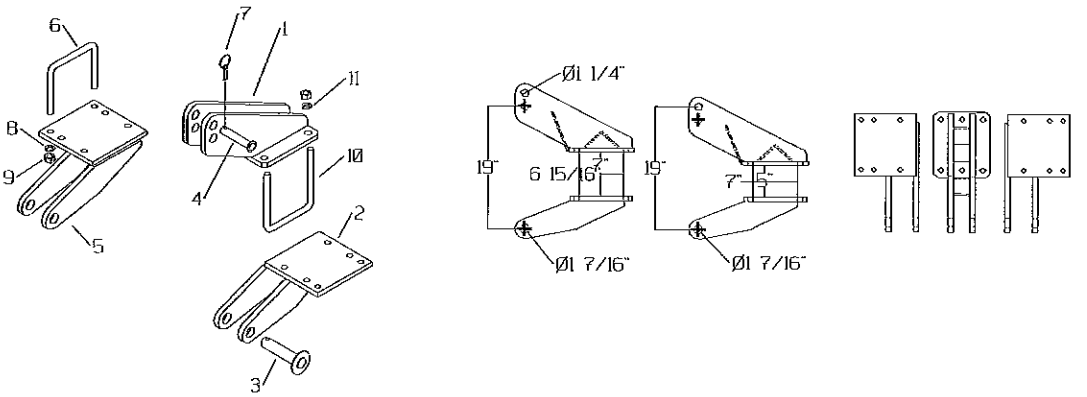




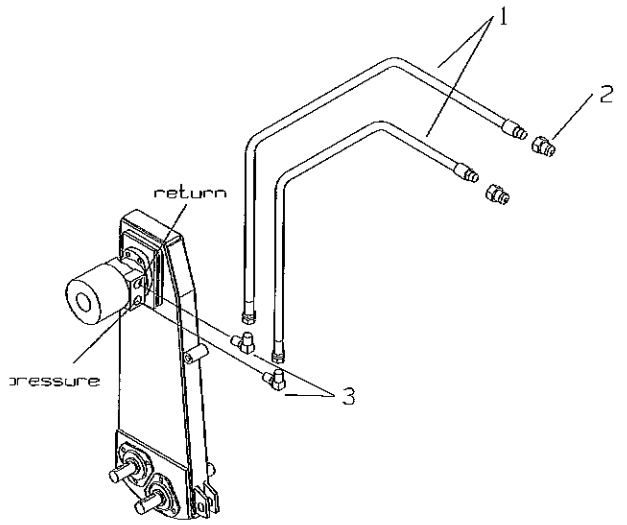
6	020965	1/4" x 1 1/2" Spring Lock Pin
7	522630	Rock Gearbox Shoe 1997
8	522615	Rock Shoe 1997
9	020056	1/2" x 3" Bolt
10	020504	1/2" Lock Washer
11	020404	1/2" Nut



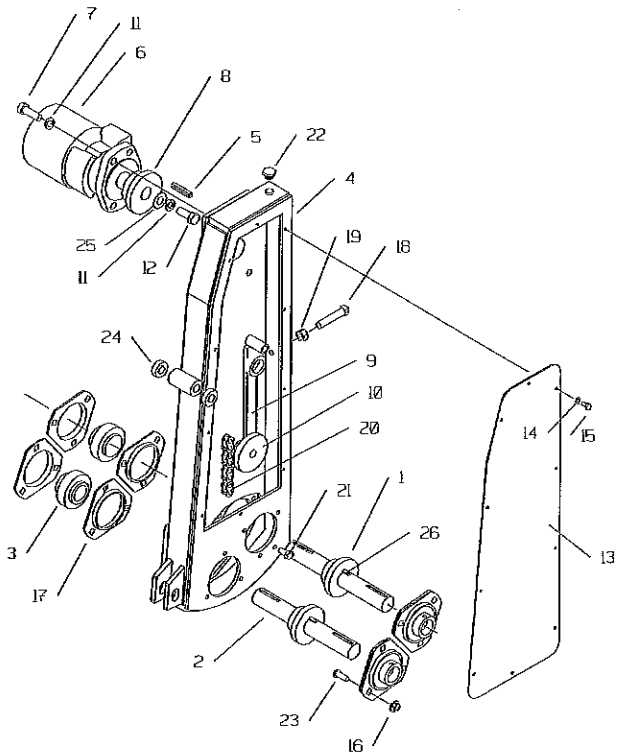
1	223710	Tire Wheel Assembly
2	127600	Spindle Assembly
3	561630	Gauge Wheel Yoke Weldment
4	096200	Turbuckle with eyeball
5	562515	Wheel Mount Weldment Right
6	562510	Wheel Mount Weldment Left
7	020090	3/4" x 7" bolt
8	020097	7/8" x 4" bolt
9	020429	7/8" Lock Nut
10	020507	3/4" Lock Washer
11	020090	3/4" Nut
12	561625	Windrower Toolbar Mount Weldment
13	020898	1" x 3" Cylinder Pin
14	020915	3/16" Hair Pin
20	127660	Shoulder Nut
21	020461	1 1/4" NF Jam Nut
22	095086	SE 13 Oil Seal CR17617
23	095094	Cone Bearing 14136A
24		
25	090003	Double Yoke Hub w/ Cup HA 520
26	090004	Spindle Double Yoke 1 3/8" x 11"



1	228680	Top 3 pt Cat. III (7/8" U-bolt)
2	228605	Lower Right Cat. III Weldment
3	228400	Cat. III Bottom 3 pt Pin
4	095263	Top Link Cat. III
5	228600	Lower Left Cat. III Weldment
6	021018	3/4" x 7" x 6 1/2" U-bolt
7	095032	7/16" Lynch Pin
8	020507	3/4" Lock Washer
9	020407	3/4" Nut
10	021030	7/8" x 7" x 7" U-bolt
11	020508	7/8" Lock Washer
12	020408	7/8" Nut



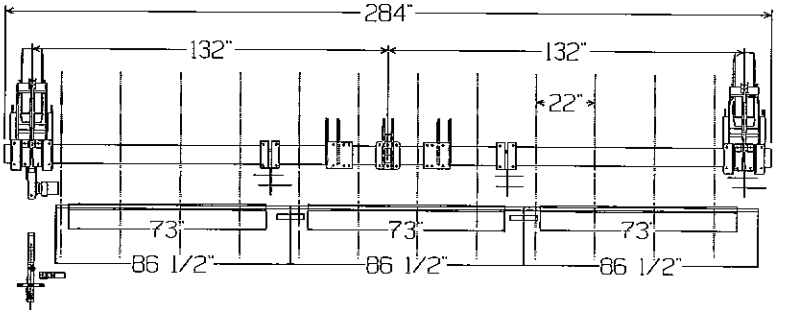
1	565502	Rod Hose (JIC - ORB) 6 row 30"
	565503	Rod Hose (JIC - ORB) 8 row 30"
	565504	Rod Hose (JIC -ORB) 12 row 22"
	095275	7/8" -14 JIC Swivel Female 1/2 Hose
	095277	ORB (3/4-16) Solid 1/2" Hose End
2	095195	S71-15P Male tip 3/4-16
3	095273	Male JIC - Male ORB 90° Elbow



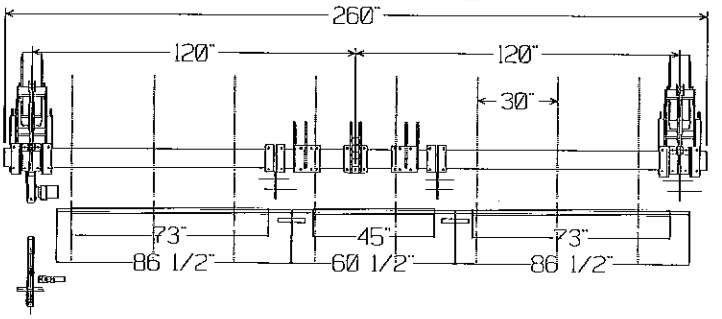
522750 Gearcase Assembly Long 1998

1	081176	6011 x 1 1/4" Finished Bore Sprocket
2	521505	Gearcase Shaft 1988
3	095264	Solid Lube Bearing (1 1/4" Bore)
4	522710	Long Gearbox Weldment
5	522702	1/4" to 5/16" Key 1 3/4" long
6	095226	1998 Rod Motor ME120103AAAA
7	020052	1/2" x 1 1/2" Bolt
8	081180	6012 x 1 1/4" Fin Bore Sprocket
9	522740	Long Gearbox tightener
10	090065	6011 x 1/2" Idler Sprocket
11	020504	1/2" Lock Washer
12	020118	1/2" x 1 1/4" Bolt
13	522731	Long Gearbox Cover Fabbed
14	020500	1/4" Lock Washer
15	020000	1/4" x 1/2" Bolt
16	020471	3/8" Flange Nut
17	521905	Gearbox Flangette
18	021364	1/2" x 2 1/2" sq hd Set Screw
19	020404	1/2" Nut
20	522701	Long Gearbox Chain
	095049	#60 Connector Link
21	020028	3/8" x 3/4" Bolt
22	090107	BPC-375 Breather 3/8" NPTF
23	020145	3/8" x 1" Button Head Bolt
24	522283	Gearbox Spacer
25	021312	5/8" Narrow 18 Ga. Bushing
26	521506	1/4" Key 1 1/4" Long

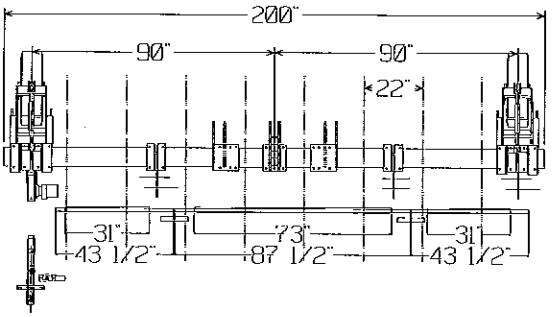
C-Shank
12-22" Heavy Duty Rod



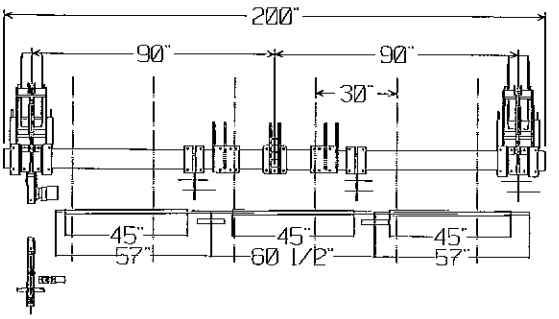
C-Shank
8-30" Heavy Duty Rod



C-Shank
8-22" Heavy Duty Rod



C-Shank
6-30" Heavy Duty Rod



1-1/8" CR Square Rod 1045

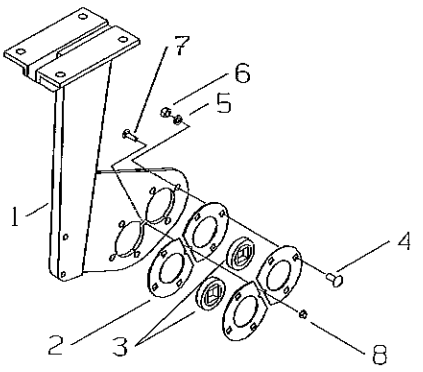
522401	41" Rod - 1 1/8" square rod
522402	60" Rod - 1 1/8" square rod
522403	76" Rod - 1 1/8" square rod
522404	87 1/2" Rod - 1 1/8" square rod
522405	60 1/2" Rod - 1 1/8" square rod
522910	42 1/2" Rod - 1 1/8" square rod
522911	47 1/2" Rod - 1 1/8" square rod
522912	37" Rod - 1 1/8" square rod
522913	53" Rod - 1 1/8" square rod
522914	61" Rod - 1 1/8" square rod
522915	69" Rod - 1 1/8" square rod
522916	82" Rod - 1 1/8" square rod
522917	91" Rod - 1 1/8" square rod
522923	57" rod - 1 1/8" square rod
522927	62" Rod - 1 1/8" square rod
522929	74" Rod - 1 1/8" square rod
522931	78" Rod - 1 1/8" square rod
522933	86 1/2" Rod - 1 1/8" square rod
522935	89 1/2" Rod - 1 1/8" square rod

Square Tube for 1 1/8" Top Rod

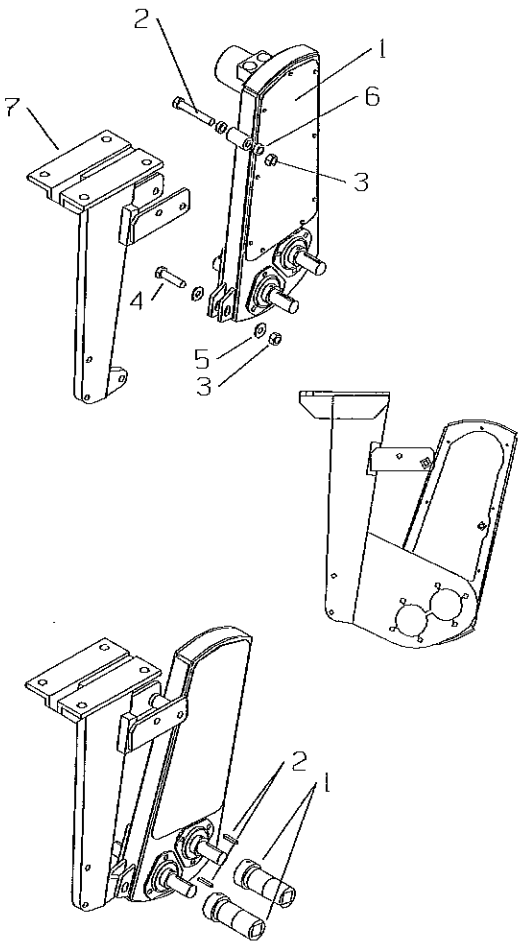
522955	2" Sq Tube for 1 1/8" (45" lg)
522957	2" Sq Tube for 1 1/8" (49" lg)
522960	2" Sq Tube for 1 1/8" (28" lg)
522962	2" Sq Tube for 1 1/8" (31" lg)
522964	2" Sq Tube for 1 1/8" (36" lg)
522967	2" Sq Tube for 1 1/8" (43" lg)
522970	2" Sq Tube for 1 1/8" (47" lg)
522973	2" Sq Tube for 1 1/8" (60" lg)
522976	2" Sq Tube for 1 1/8" (65" lg)
522980	2" Sq Tube for 1 1/8" (70" lg)
522983	2" Sq Tube for 1 1/8" (73" lg)
522985	2" Sq Tube for 1 1/8" (77" lg)

1 1/2" Black Pipe Schedule 10

522988	1 1/2" Black Pipe (s10) 28" lg
522989	1 1/2" Black Pipe (s10) 31" lg
522990	1 1/2" Black Pipe (s10) 36" lg
522991	1 1/2" Black Pipe (s10) 43" lg
522992	1 1/2" Black Pipe (s10) 45" lg
522993	1 1/2" Black Pipe (s10) 47" lg
522994	1 1/2" Black Pipe (s10) 49" lg
522995	1 1/2" Black Pipe (s10) 60" lg
522996	1 1/2" Black Pipe (s10) 65" lg
522997	1 1/2" Black Pipe (s10) 70" lg
522998	1 1/2" Black Pipe (s10) 73" lg
522999	1 1/2" Black Pipe (s10) 77" lg

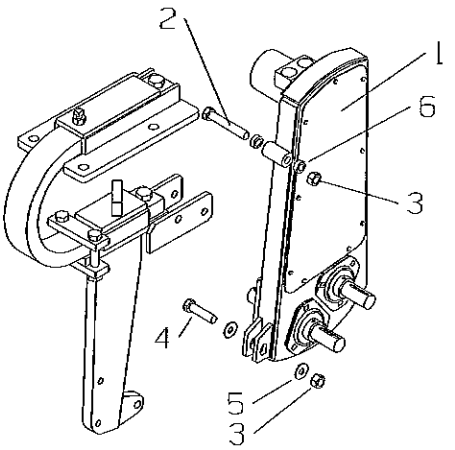


1	520170	Stiff Rod Standard
2	521900	Rod Flangette
3	095039	1 1/8" Square Bearing
4	020686	1/2" x 1 1/4" Carriage Bolt
5	020504	1/2" Lock Washer
6	020404	1/2" Nut
7	020632	3/8" x 1 1/4" Carriage Bolt
8	020471	3/8" Flange Nut

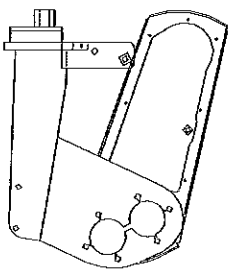


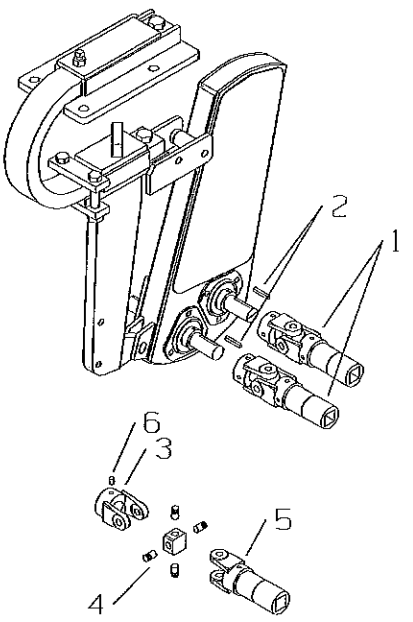
1	522320	Gearcase Assembly Short 1998
2	020063	5/8" x 4 1/2" Bolt
3	020427	5/8" Lock Nut
4	020066	5/8" x 2 1/2" bolt
5	020536	5/8" Flat Washer
6	522283	Gearbox Spacer 1995
7	520180	Rod Gearbox Stiff Standard

1	522490	Stiff Shank Gearbox Coupler
2	521507	1/4" Key - 1 5/8" Long



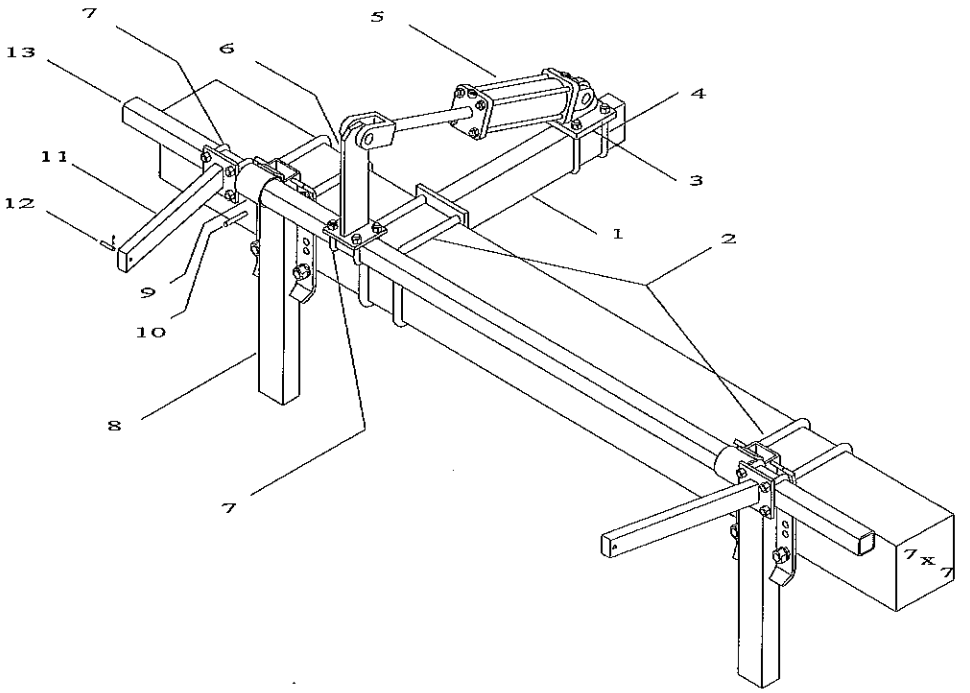
1	522320	Gearcase Assy. Short 1998
2	020063	5/8" x 4 1/2" bolt
3	020427	5/8" Lock Nut
4	020066	5/8" x 2 1/2" Bolt
5	020536	5/8" Flat Washer
6	522283	Gearbox Spacer 1995





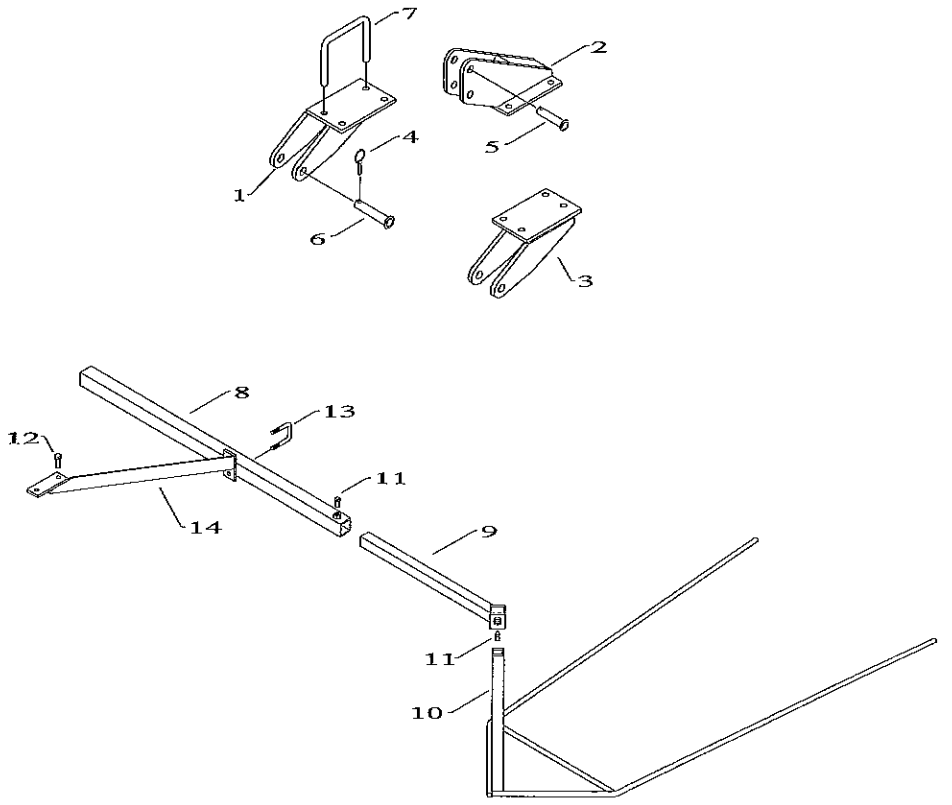
1	522470	Complete U-Joint Assy.
2	521507	1/4" Key- 1 5/8" Long
3	522482	U-Joint Yoke Drilled/Tapped
4	090116	Pin & Block Assembly
5	522480	U-Joint Yoke Welded
6	021416	3/8" x 1/2" Allen Head Set Screw

FRONT DIVIDER LIFT



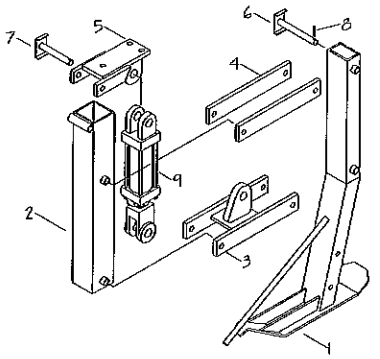
REF.	PART NO.	DESCRIPTION
1	505760	Cylinder Mount Bracket
2	021036	5/8" x 7" x 8 1/2" U-Bolt
	020506	5/8" Lock Washer
	020406	5/8" Nut
3	505770	Divider Cylinder Mount Weldment
4	021001	1/2" x 2" x 5 1/4" U-Bolt
	020504	1/2" Lock Washer
	020404	1/2" Nut
5	095172	3" x 8" 3/4 ORB Port Cylinder
6	504310	Cylinder Lift Arm
7	021000	1/2" x 2" x 3" U-Bolt
8	504100	Divider Mount Tube
9	504210	Pivot Pipe Weldment (95)
10	020875	3/8" x 2 1/2" Clevis Pin
11	504410	Divider Lift Arm (95)
12	020865	5/16" x 1 1/2" Clevis Pin
13	504010	Divider Lift Tube (95)

REAR MOUNT ASSEMBLIES



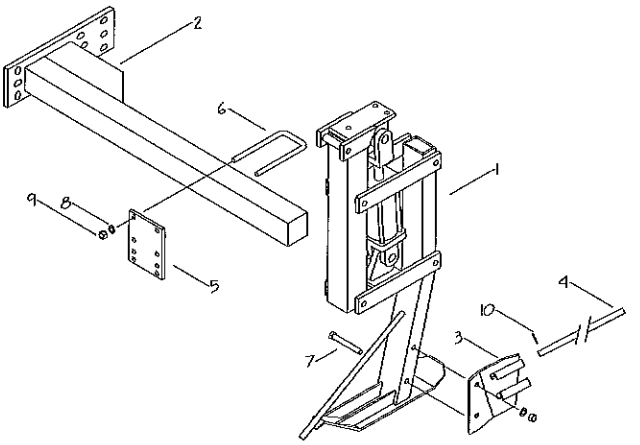
REF.	PART NO.	DESCRIPTION
1	220700	Lower 3 Point Hitch Left
2	220500	Upper 3 Point Hitch
3	220600	Lower 3 Point Hitch Right
4	095032	Lynch Pin
5	220900	Top 3 Point Pin
6	220800	Lower 3 Point Pin
7	021018	3/4" x 7" x 6 1/2" U-Bolt
8	503200	Divider Mount Rear Tube
9	503100	Rear Divider Mount
10	503300	Rear Row Divider
11	021362	Set Screw 1/2" x 1"
12	020052	1/2" x 1 1/2" Bolt
13	021000	1/2" x 2" x 3 1/2"
14	506400	Angle Bracket Left
	506800	Angle Bracket Right

#503230 Rear Tire Divider Assembly



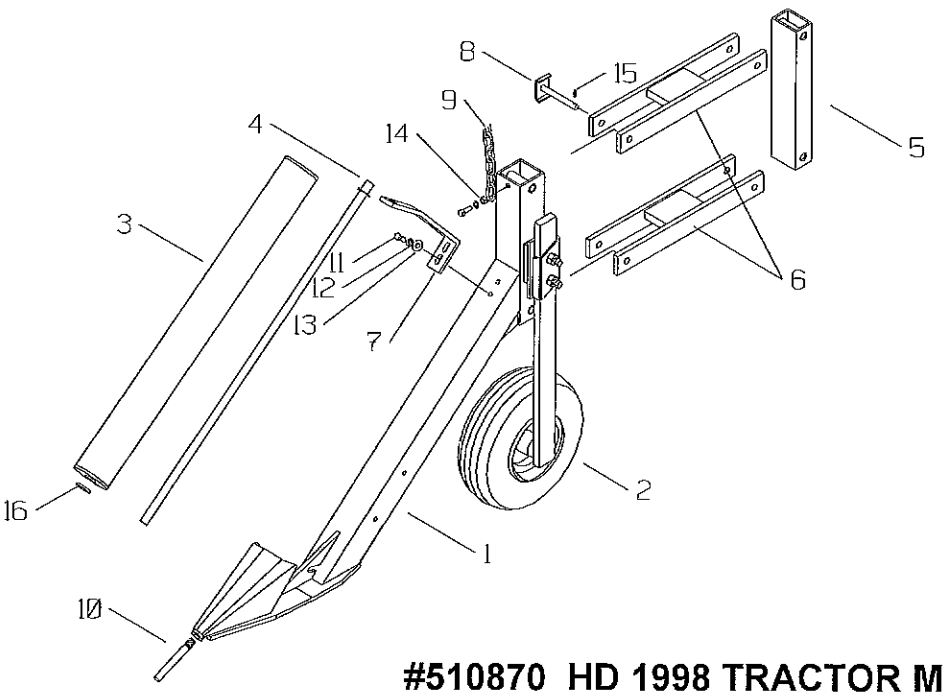
REF.	PART NO.	DESCRIPTION
1	503235	Rear Tire Divider Weldment
2	503240	Front Parallel Tube Weldment
3	503245	Lower Parallel Linkage
4	503248	Linkage Flat Painted
5	503250	Upper Cylinder Mount Weldm
6	503255	Tire Divider Pin
7	510400	Row Divider Pin
8	020958	3/16" x 1 1/4" roll Pin
9	095123	2" x 4" Cylinder 2500 psi

#562004 Rear Tire Divider Lift Package (Pair)

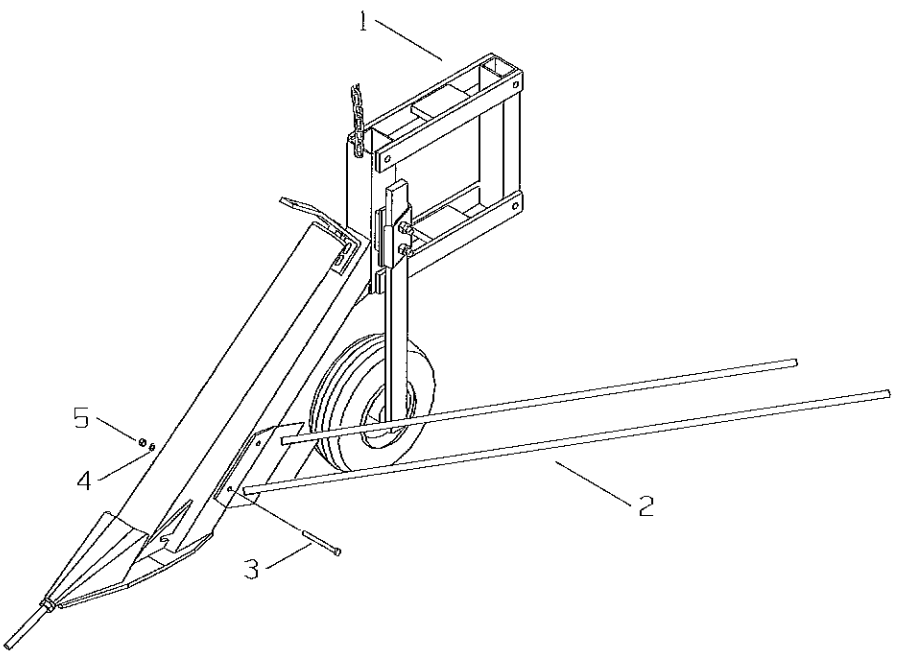


REF.	PART NO.	DESCRIPTION
1	503230	Rear Tire Divider Assy.
2	503260	Standard Divider Mount
3	522650	Divider Mount Left Weldment
	522650	Divider Mount Right Weldmen
4	520398	Shoe Rod with Hole 1997
5	503700	Unviersal Bar Mount Plate
6	021004	1/2" x 3" x 7 1/4" u-bolt
7	020058	1/2" x 4" Bolt
8	020504	1/2" Lock Washer
9	020404	1/2" Nut
10	020965	1/4" x 1 1/2" roll pin

#510865 HD 1998 DIVIDER TRCTOR MOUNT ASSY.



#510870 HD 1998 TRACTOR MOUNT ASSY. WITH RODS



REF.	PART NO.	DESCRIPTION
1	510370	Divider Weldment 1998
2	510425	Divider Gauge Wheel Assembly 1996
3	510430	32 5/8" Roller Assembly
4	510540	36" Roller Shaft (3/4" CR) 1998
5	510440	Front Bar Tube Weldment 15" long
6	510445	Divider Linkage 18" (1996)
7	510525	Upper Roller Mount 1998
8	510400	Row Divider Pin (1996)
9	502800	Divider Chain
10	510146	Divider Point Bolt
11	020029	3/8" x 1" Bolt
12	020502	3/8" Lock Washer
13	020513	3/8" Flat Washer
14	020402	3/8" Nut
15	020958	3/16" x 1 1/4" spring lock pin
16	021313	3/4" narrow 14 ga bushing

REF.	PART NO.	DESCRIPTION
1	510860	HD 1998 Bar Mount Assy. with Rods
2	502000	Divider Rod Left
	501900	Divider Rod Right
3	020034	3/8" x 4" Bolt
4	020502	3/8" Lock Washer
5	020402	3/8" Nut