McFARLANE MFG. CO. INC.
Sauk City, Wisconsin

MANUFACTURERS OF QUALITY AGRICULTURAL EQUIPMENT SINCE 1936

OPERATOR'S MANUAL
AND
PARTS LISTING
FOR THE

SPR-1000 Series

Reel Seedbed Conditioner

Version: 12599 (02-17)
Serial Number 20648 - higher

TO THE OWNER AND OPERATORS

Before assembling or operating this unit, READ THIS MANUAL THOROUGHLY. To obtain the best performance of the unit, familiarize yourself with each component and adjustment. Store this manual where it can be readily available for future reference. In the event that the harrow or any part of the unit should be sold, be sure that the new owner receives a copy of this manual for their reference.

1330 DALLAS STREET, P.O. BOX 100
SAUK CITY, WISCONSIN 53583
PHONE: (608) 643-3321
TOLL FREE: (800) 627-8569 FAX: (608) 643-3976

TABLE OF CONTENTS

INTRODUCTION....3

LIMITED WARRANTY....3

SAFETY....4

CONTACT INFORMATION....5

LIGHTING AND MARKING....6

SAFETY SIGN CARE....7 - 8

TIRE SAFETY....7

BEFORE OPERATION....7 - 8

DURING OPERATION....8 - 9

FOLLOWING OPERATION....9

HIGHWAY AND TRANSPORT OPERATIONS....9 - 10

PERFORMING MAINTENANCE....10

MAINTENANCE AND SERVICE SCHEDULE....11

OPERATING SUGGESTIONS....11

ASSEMBLY SUGGESTIONS....12

ASSEMBLY INSTRUCTIONS....13 – 30

FINAL ADJUSTMENTS....30

TROUBLESHOOTING....31

BOLT TORQUE SPECIFICATIONS....APPENDIX A

PARTS DIAGRAMS AND LISTS....APPENDIX B

LAYOUT DIAGRAMS....APPENDIX C

WARRANTY REGISTRATION FORM....53

DEALER CONTACT INFORMATION....54

INTRODUCTION

Thank you for purchasing your new McFarlane Spiral Reel Stalk Chopper. We know that you will get many years of dependable service from this modernly designed unit.

You may have had a particular application in mind when you purchased this unit. There are actually many uses for the McFarlane harrow including incorporation of herbicides and pesticides, leveling and smoothing tilled soil, and covering of broadcast seeds. Contact your dealer if you would like more information or have questions concerning these or other applications.

LIMITED WARRANTY

FULL ONE - YEAR WARRANTY OF

SPR-1000 Series
all Models

If within one year from the date of purchase, this transport cart and/or its accompanying harrow sections fail due to defect in material or workmanship, McFarlane Mfg. Co., Inc. will repair it, free of charge.

Warranty service is available by simply contacting the nearest McFarlane dealership throughout the United States or Canada.

This warranty applies only while this product is used in the United States or Canada.

This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

McFarlane Mfg. Co., Inc., Sauk City, Wisconsin 53583

SAFETY

TAKE NOTE! THIS SAFETY ALERT SYMBOL FOUND THROUGHOUT THIS MANUAL IS USED TO CALL ATTENTION TO INSTRUCTIONS INVOLVING YOUR PERSONAL SAFETY AND THE SAFETY OF OTHERS. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN INJURY OR DEATH.

THIS SYMBOL MEANS

- **ATTENTION!**
- **BECOME ALERT!**
- **YOUR SAFETY IS INVOLVED!**

SIGNAL WORDS:

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

DANGER: Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury.

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

CAUTION: Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury.

CONTACT INFORMATION

If you have questions not answered in this manual, require additional copies, or the manual is damaged, please contact your local dealer or:

McFarlane Mfg. Co., Inc.
1330 Dallas Street
P.O. Box 100
Sauk City, WI 53583

PHONE: (608) 643-3321
TOLL FREE: (800) 627-8569
FAX: (608) 643-3976
INTERNET: www.flexharrow.com

SAFETY FIRST!

Equipment Safety Guidelines

Safety of the operator is one of the main concerns in designing and developing a new piece of equipment. Designers and manufacturers build in as many safety features as possible. However, every year many accidents occur which could have been avoided by a few seconds of thought and a more careful approach to handling equipment. You, the operator, can avoid many accidents by observing the following precautions. To avoid personal injury, study the following precautions and insist that those working with you, or for you, follow them.

Replace any CAUTION, WARNING, DANGER, or instruction safety decal that is not readable or missing.

Do not attempt to operate this equipment under the influence of drugs or alcohol.

Review the safety instructions with all users annually.

This equipment is dangerous to children and persons unfamiliar with its operation. The operator should be a responsible adult familiar with farm machinery and trained in this equipment's operations. **Do not allow persons to operate or assemble this unit until they have read this manual and have developed a thorough understanding of the safety precautions and of how it works.**

To prevent injury, use a tractor equipped with a Roll Over Protective System (ROPS). Do not paint over, remove, or deface any safety signs or warning decals on your equipment. Observe all safety signs and practice the instructions on them.

Never exceed the limits of the transport cart or the harrows. If their ability to do a job, or to do so safely, is in question - **DO NOT TRY IT**.

Lighting and Marking

It is the responsibility of the customer to know the lighting and marking requirements of the local highway authorities and to install and maintain the equipment to provide compliance with the regulations. Add extra lights when transporting at night or during periods of limited visibility.

Lighting kits are available from your dealer.

Safety Sign Care

- Keep safety signs clean and legible at all times.
- Replace safety signs that are missing or have become illegible.
- Replacement parts that display a safety sign should display the same sign.
- Safety signs are available from your Distributor, Dealer Parts Department, or the factory.

How to Install Safety Signs:

- Be sure that the installation area is clean and dry.
- Decide on the exact position before you remove the backing paper.

 **Tire Safety**

- 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.
- Do not attempt to mount tires unless you have the proper equipment and experience to do the job.
- Inflating or servicing tires can be dangerous. Whenever possible, trained personnel should be called to service and/or mount tires.
- Always order and install tires and wheels with appropriate capacity to meet or exceed the weight of the unit. Be sure to inflate tires to tire manufacturer's specifications
- Tires that are provided by the manufacturer are designed for speeds LESS THAN 20mph. Do Not exceed or tire failure will occur.

 **Remember**:

Your best assurance against accidents is a careful and responsible operator. If there is any portion of this manual or function you do not understand, contact your local authorized dealer or the manufacturer.

 **Before Operation:**

- Carefully study and understand this manual.
- Do not wear loose fitting clothing which may catch in moving parts.
- Always wear protective clothing and substantial shoes.
- It is recommended that suitable protective hearing and (eye protection) sight protectors be worn.
- Keep wheel lug nuts or bolts tightened.
- Assure that the tires are inflated evenly.
- Give the unit a visual inspection for any loose bolts, worn parts, or cracked welds, and make necessary repairs. Follow the maintenance safety instructions included in this manual.
- Before using the hydraulics on the cart, be sure all fittings and connections are tight.
- Be sure that there are no tools lying on the unit.
- Make sure that the area is clear of children, animals, and other obstacles before using.

- Don’t hurry the learning process or take the unit for granted. Ease into it and become familiar with your new equipment. Practice operation of your new unit. Completely familiarize yourself and other operators with its operation before using.
- Securely attach to towing unit. Use a high strength, appropriately sized hitch pin with a mechanical retainer and attach safety chain.
- Do not allow anyone to stand between the tongue or hitch and the towing vehicle when backing up to the equipment.

 **<u>During Operation</u>:**

- SAFETY CHAIN - If equipment is going to be transported on a public highway, a safety chain should be obtained and installed. Always follow state and local regulations regarding a safety chain when towing farm equipment on a public highway. Be sure to check with local law enforcement agencies for your own particular regulations. Only a safety chain (not an elastic or nylon/plastic tow strap) should be used to retain the connection between the towing and towed machines in the event of separation of the primary attaching system.
- Install the safety chain by crossing the chains under the tongue and secure to the draw bar cage or hitch or bumper frame.
- Beware of bystanders, **particularly children!** Always look around to make sure that it is safe to start the engine of the towing vehicle or move the unit. This is particularly important with higher noise levels and quiet cabs, as you may not hear people shouting.
- **NO PASSENGERS ALLOWED** - Do not carry passengers anywhere on, or in, the tractor or equipment, except as required for operation.
- Keep hands and clothing clear of moving parts.
- Do not clean, lubricate, or adjust your equipment while it is moving.
- When altering operation, even periodically, set the tractor or towing vehicle brakes, shut off the engine, and **remove the ignition key.**
- Do not operate the hydraulic cylinders without the flow restrictors installed; the free falling harrow sections may cause serious injury.
- Pick the levelest possible route when transporting across fields. Avoid the edges of ditches or gullies and steep hillsides.
- Periodically clear the equipment of brush, twigs, or other materials to prevent buildup of dry combustible materials.
- Maneuver the tractor or towing vehicle at safe speeds.
- Avoid overhead wires or other obstacles. Contact with overhead lines could cause serious injury or death.
- Allow for unit length when making turns.
- Do not walk or work under raised wings unless securely positioned in wing rests.
- Keep all bystanders, pets, and livestock clear of the work area, particularly when raising or lowering harrow sections.

- Operate the towing vehicle from the operator's seat only.
- As a precaution, always recheck the hardware on equipment periodically. Correct all problems. Follow the maintenance safety procedures.

 **Following Operation:**

- When disconnecting, stop the tractor or towing vehicle, set the brakes, secure the wings in the wing rests, relieve hydraulic fluid pressure, shut off the engine and **remove the ignition keys.** Make sure all jack and support stands are in place before removing hitch pins.
- Store the unit in an area away from human activity on a hard level surface.
- Do not park equipment where it will be exposed to livestock for long periods of time. Damage and livestock injury could result.
- Do not permit children to play on or around the stored unit.

 **Highway and Transport Operations:**

- Make sure all transport lock provisions are in place and jack/parking stands are in their storage position before transporting the unit.
- Adopt safe driving practices:
  - Keep the brake pedals latched together at all times. **NEVER USE INDEPENDENT BRAKING WITH MACHINE IN TOW AS LOSS OF CONTROL AND/OR UPSET OF UNIT MAY RESULT.**
  - Always drive at a safe speed relative to local conditions and ensure that your speed is low enough for an emergency stop to be safe and secure. Keep speed to a minimum.
  - Reduce speed prior to turns to avoid the risk of overturning.
  - Avoid sudden uphill turns on steep slopes.
  - Always keep the tractor or towing vehicle in gear to provide engine braking when going downhill. Do not coast.
  - Do not drink and drive!
- Comply with state and local laws governing highway safety and movement of farm machinery on public roads.
- Use approved accessory lighting flags and necessary warning devices to protect operators of other vehicles on the highway during daylight and nighttime transport. Various safety lights and devices are available from your dealer.
- The use of flashing amber lights is acceptable in most localities. However, some localities prohibit their use. Local laws should be checked for all highway lighting and marking requirements.
- When driving the tractor and equipment on the road or highway under 20 mph at night or driving during the day, use flashing amber warning lights and a slow moving vehicle (SMV) identification emblem.

- Remember, tires supplied by the manufacturer are designed to operate LESS THAN 20mph. Do Not exceed or tire failure will occur.
- Be a safe and courteous driver. Always yield to oncoming traffic in all situations, including narrow bridges, intersections, etc. Plan your route to avoid heavy traffic.
- Be observant of bridge loading ratings. Do not cross bridges rated lower than the gross weight at which you are operating.
- Watch for obstructions overhead and to the side while transporting.
- Always operate equipment in a position to provide maximum visibility at all times. Make allowances for increased length and weight of the equipment when making turns, stopping, etc.

 **Performing Maintenance:**

- Good maintenance is your responsibility. Poor maintenance is an invitation to trouble.
- Before working on this machine, stop the tractor or towing vehicle, set the brakes, lower into field position, relieve the hydraulic fluid pressure, shut off the engine and **remove the ignition keys.**
- **Always** use safety support and block the wheels. When performing maintenance, never use a jack to support the machine. Assist the jack with blocks or other adequate support.
- Use extreme caution when making adjustments.
- When disconnecting hydraulic lines, shut off hydraulic supply and relieve all pressure.
- Never use hands to locate a hydraulic leak on attachments. Use a piece of cardboard or wood. Hydraulic fluid escaping under pressure can penetrate the skin.
- Openings in the skin and minor cuts are susceptible to infection from hydraulic fluid. **If injured by escaping hydraulic fluid, see a doctor at once. Gangrene can result. Without immediate medical treatment, serious infection and reactions can occur.**
- When installing, replacing, or repairing hydraulic system cylinders or parts, make sure that the entire system is charged and free of air before resuming operations. Failure to bleed the system of all air can result in improper machine operation, causing severe injury.
- After servicing, be sure all tools, parts, and service equipment are removed.
- Never replace hex bolts with less than grade five bolts unless otherwise specified.
- Where replacement parts are necessary for periodic maintenance and servicing, genuine factory replacement parts must be used to restore your equipment to original specifications. The manufacturer will not claim responsibility for damages as a result of the use of unapproved parts and/or accessories.
- If equipment has been altered in any way from original design, the manufacturer does not accept any liability for injury or warranty.

MAINTENANCE AND SERVICE SCHEDULE

- Prior to each use, check for loose bolts and replace lost or worn parts.
- Grease hinge pins before each use when necessary.
- Grease spiral reel bearings daily.

  Note: Clean grease fittings and replace those that are broken or missing.
- Inspect and repack wheel bearings at the beginning of each year.
- Remove dirt and debris from the harrow sections before storage.
- Parts diagrams and listings for service and repair references may be found in appendix B.

OPERATING SUGGESTIONS

There are some important points to remember in order to obtain the best possible results from your McFarlane harrow.

- To maximize the harrow's performance, it should be towed at speeds ranging from six to nine (6 - 9) mph. This keeps the field debris moving through the harrow sections and avoids clogging. The best results will be obtained after the paint has been scoured from the teeth.
- Choose the angle of attack of the harrow teeth based on field conditions. For more information see the section titled Angle of Attack.
- Getting the unit ready for transport includes the following steps:
  1. Rotate the harrow sections up.
  2. Swing the wings forward and lock them into the wing rests.
- Getting the unit ready for field use includes the following steps:
  1. Unlock the wings from the wing rests and swing the wings out.
  2. Rotate the harrow sections down.
- Adjusting the leveling board height includes the following steps:
  1. Remove the detent pin and flip the turnbuckle lock up out of the way.
  2. Adjust turnbuckle with turnbuckle wrench provided.
  3. Flip turnbuckle lock down to lock the turnbuckle in place and secure with the detent pin.
- Adjusting the pull point height includes the following steps:
  4. Remove the bolts that hold the pull point to the lift arm.
  5. Adjust the pull point up or down, ensuring it does not contact the ground during operation.
  6. Replace the attaching bolts.
- If the wing cables are not tight, adjust the bracket on the wing outward to tighten them. Follow the instructions in the section titled Attach the Wing Cables.

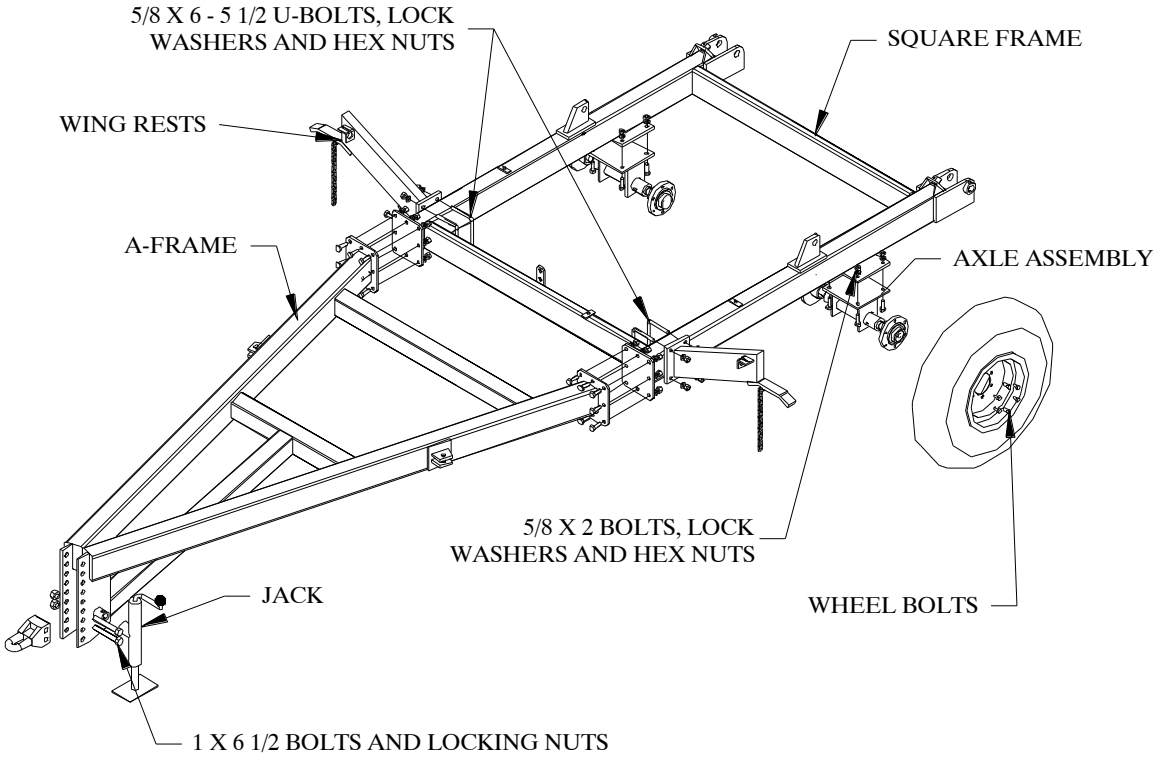
ASSEMBLY SUGGESTIONS

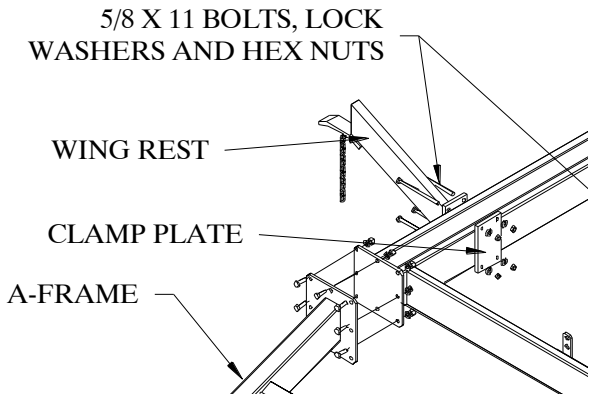
- You will find the machine is easier to assemble if the set-up instructions are followed in the order given in the manual.
- Before beginning, sort the various bolt bags, hardware bags and hydraulic bags according to what part of the unit that is being setup. Refer to the end of the parts listing in appendix B. Only open the bag or bags that are required as the setup instructions are followed.
- Whenever the terms “left” and “right” are used, it should be understood to mean when standing behind and facing the unit. This is also known as the “driver’s left” and the “driver’s right.”
- The term “field position” refers to the position the harrows are in when the unit is being used in the field - that is, with the wings out and the harrow sections down.
- The term “transport position” refers to the position the harrows would be in when the unit is being transported from place to place - that is, with the harrows up and the wings folded and secured in the wing rests.
- When assembling this unit, make sure that the parts are securely held before proceeding to the next step.
- Bolt torque specifications are given in appendix A.
- The hydraulic cylinder and hose requirements are listed in the parts listing in appendix B. It is not recommended that other size cylinders or hoses be substituted. Hoses are marked with the part number near the ends. The last three digits indicate the hose length in inches. Fittings with a restrictor are marked with an ‘R’.
- A dual acting hydraulics supply is required.
- Tire requirements are also listed in the parts listing in appendix B.
- Layout diagrams for each unit may be found in appendix C. Mark the page with the diagram that refers to your unit, it will be referred to periodically throughout the manual.

STEP-BY-STEP ASSEMBLY INSTRUCTIONS

Main Frame Assembly

1. Bolt the A-Frame to the Square Frame. Use 16 - 5/8" x 2" bolts, lock washers and hex nuts.
2. Bolt the Axle assemblies to the Square Frame. Use 8 - 5/8" x 2" bolts, lock washers and hex nuts.
3. Mount the wheels onto the axle assemblies. Use the 24 wheel bolts.
4. Attach the Wing Rests to the Square Frame. Use 4 - 5/8" x 6" x 5 1/2" U-bolts, lock washers and hex nuts (models 1020 through 1030). Use 5/8" x 11" bolts, lock washers, hex nuts and clamp plates for models 1036 and 1040. Do Not Tighten yet.
5. Attach the Jack Stand to the tube on the A-Frame with the attached pin.
6. Attach the Hitch Assembly to the hitch housing using the 2 - 1" x 6 1/2" bolts and locking nuts.

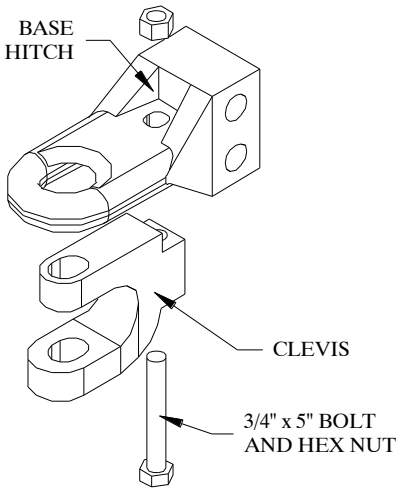




models 1036 & 1040

7. Assemble either a clevis hitch or a pintle hitch as required by the tractor or towing vehicle. Note the opposite orientation of the base hitch for each hitch type. Attach the hitch assembly to the A-frame with two 1" x 6 1/2" bolts and locking nuts.

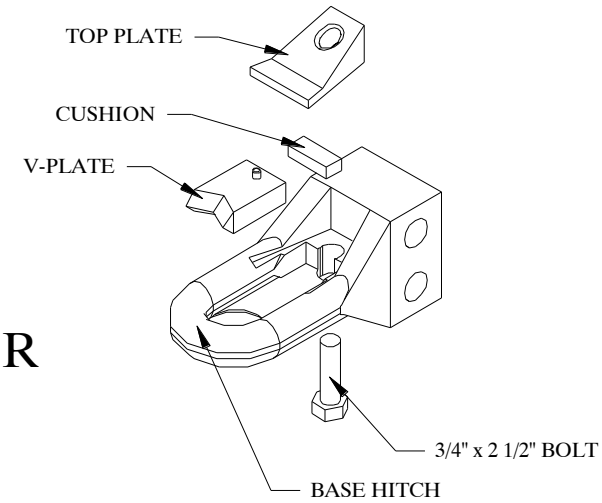
CLEVIS HITCH



Clevis Hitch

OR

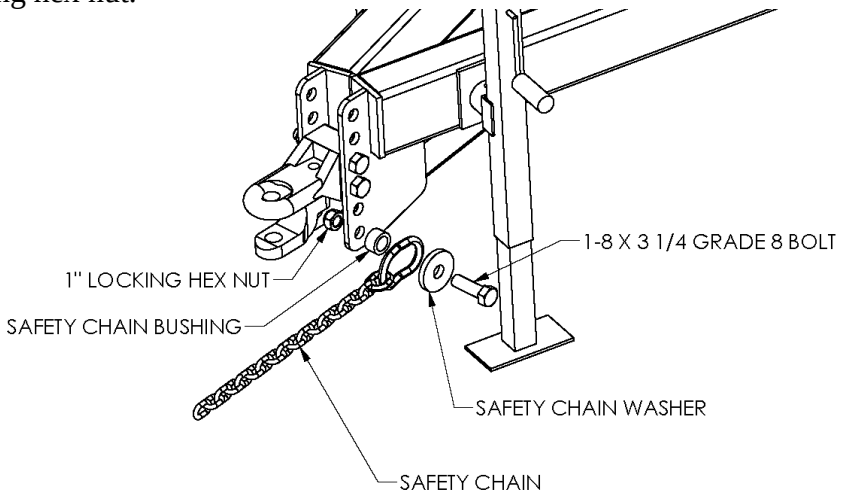
PINTLE HITCH



Pintle Hitch

Attach the Safety Chain

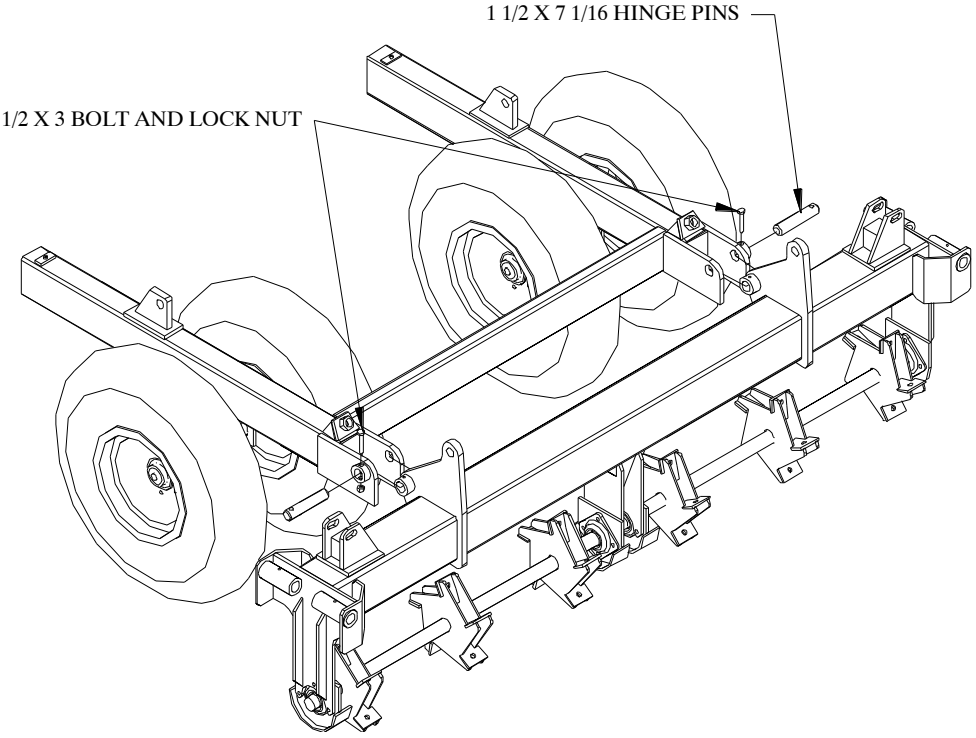
1. Attach the Safety Chain to the Main Frame with the 1-8 x 3 1/4 grade 8 bolt and locking hex nut.



Attach the Center Bar

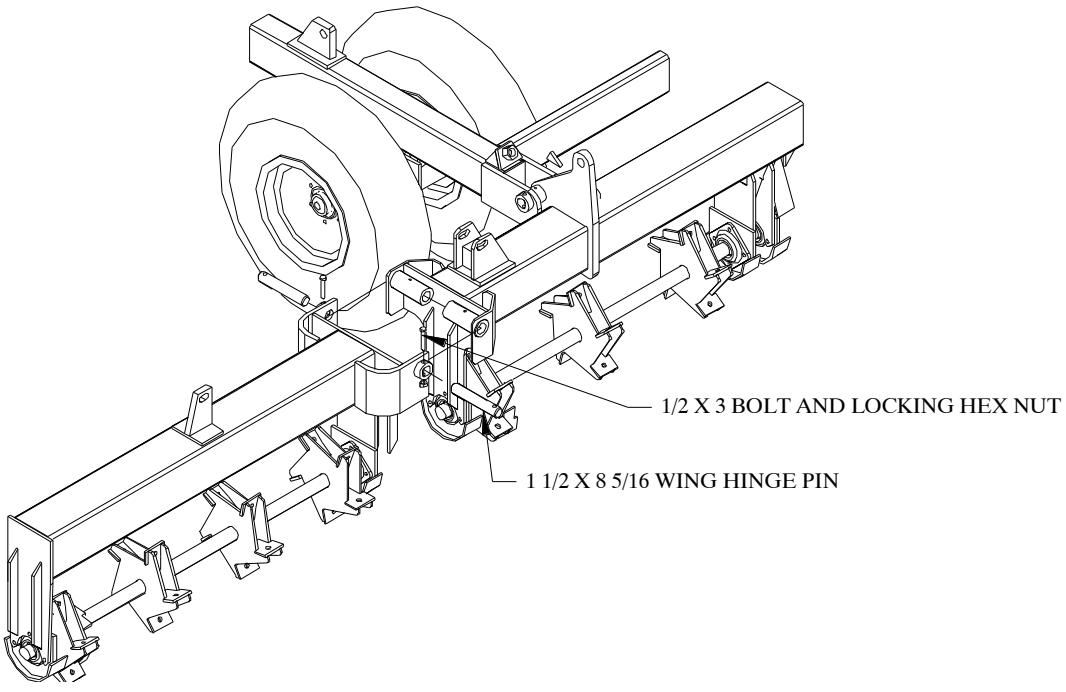
Note: For better clarity the Spiral Reel Assemblies are shown without cutter blades.

1. Attach the Center Bar to the Square Frame assembly. Use the 1 1/2" x 7 1/16" (models 1020 through 1030) or 1 1/2" x 11 1/16" (models 1036 and 1040) center bar hinge pins and the 1/2" x 3" grade 8 bolts and locking hex nuts.



Attach the Wings

Attach the wing to the center bar using the 1 1/2" x 8 5/16" wing hinge pins and the 1/2" x 3" grade 8 bolts and locking hex nuts.

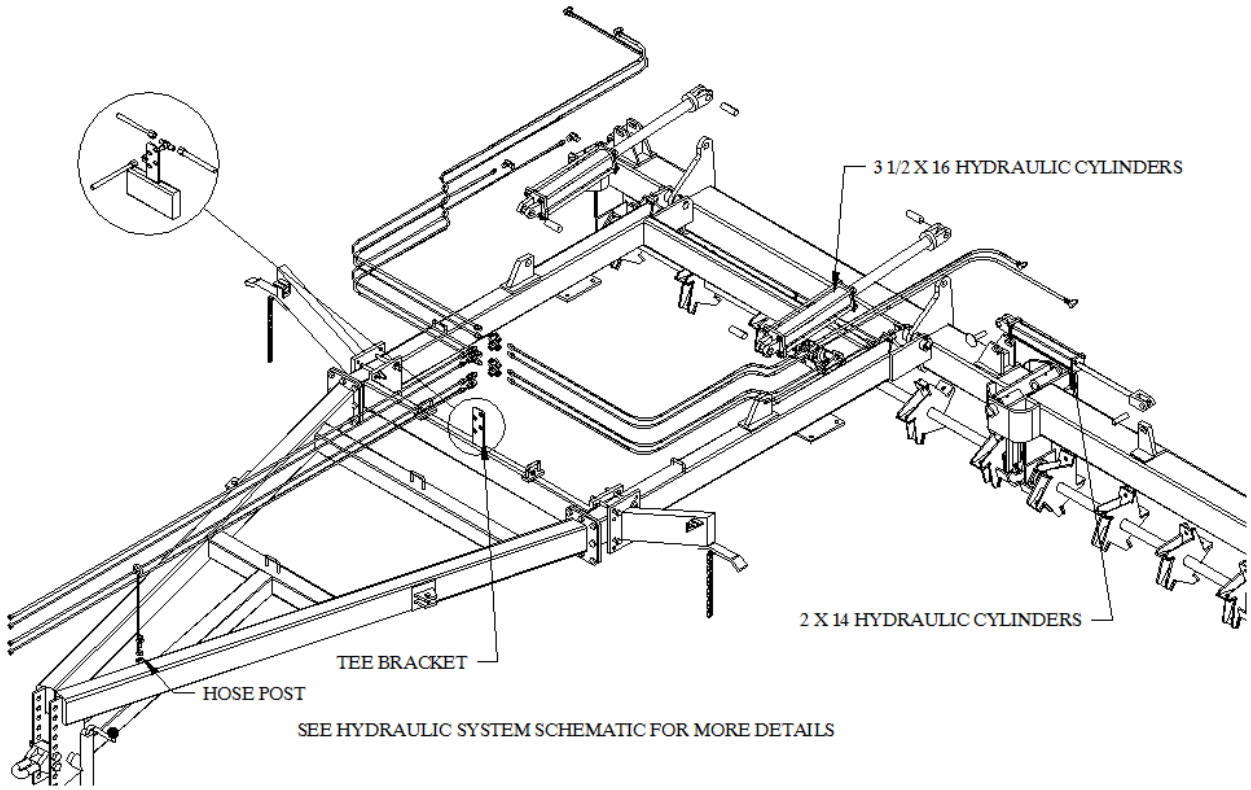


Install the Main Frame Hydraulics

Use the Hydraulic System Schematic in appendix B for more details.

1. Attach the 3 1/2" x 16" (models 1020 through 1030) or 4" x 16" (models 1036 and 1040) hydraulic cylinders to the cylinder posts on the square frame. (Note the ports are toward the outside of cart, cylinder base towards the front.)
2. Insert a 3/8m – 1/2o-ring elbow into each of the ports in the rod end and a 3/8m – 1/2o-ring elbow with restrictor into each of the ports in the base end of the main frame cylinders. Do Not Overtighten.
3. Attach two male tees to the hydraulic tee bracket in the middle of the square frame using the tee nuts.
4. Attach two 168" (models 1020 through 1030) or 216" (models 1036 and 1040) hoses to the two tees and run to the front of the unit.
5. Connect a 72" and a 96" (models 1020 through 1030) or a 100" and a 126" (models 1036 and 1040) hose from the tees to the main frame cylinders. The longer hose should be attached to the elbow in the rear ports. The shorter hose should be attached to the elbow in the front ports.
6. Attach the wing cylinders (14" stroke) to the cylinder posts on the Center Bar and Wings.
7. Insert a 3/8m – 1/2o-ring elbow into each of the ports in the base end and a 3/8m – 1/2o-ring elbow with restrictor into each of the ports in the rod end of the wing cylinders. Ports should be facing forward. Do Not Overtighten.
8. Attach a 132" and a 150" (models 1020 through 1030) or a 158" and 168"(models 1036 and 1040) hose to the elbows in the wing cylinders. Be sure that the longer hose gets attached to the outer ports and the shorter hose to the inner ports.
9. Attach two male tees to the hydraulic tee bracket in the middle of the square frame using the tee nuts. Attach two 168" (models 1020 through 1030) or 216" (models 1036 and 1040) hoses to the two tees and run to the front of the unit.
10. Connect the wing cylinder hoses to the tees.
11. Make sure that the hydraulic hoses that go to the wing cylinders are up on top of the center bar tube and the lift arm and not allowed to hang down in front of the center bar where they will come in contact with the spiral reel blades. Use the hose clamp assemblies provided to secure the hoses to the main frame. Use four clamp bodies, cover plate and a 5/16" x 2 1/4" bolt to secure to the frame. In places where only two hoses run, use two clamp bodies, cover plate and a 5/16" x 1 3/4" bolt.

Before further assembly, the hydraulic system must be filled with oil. Attach the unit to a tractor and hook up the hydraulics. Using the hydraulic controls, rotate the center bar and wings several times to fill the cylinders and hoses with oil.



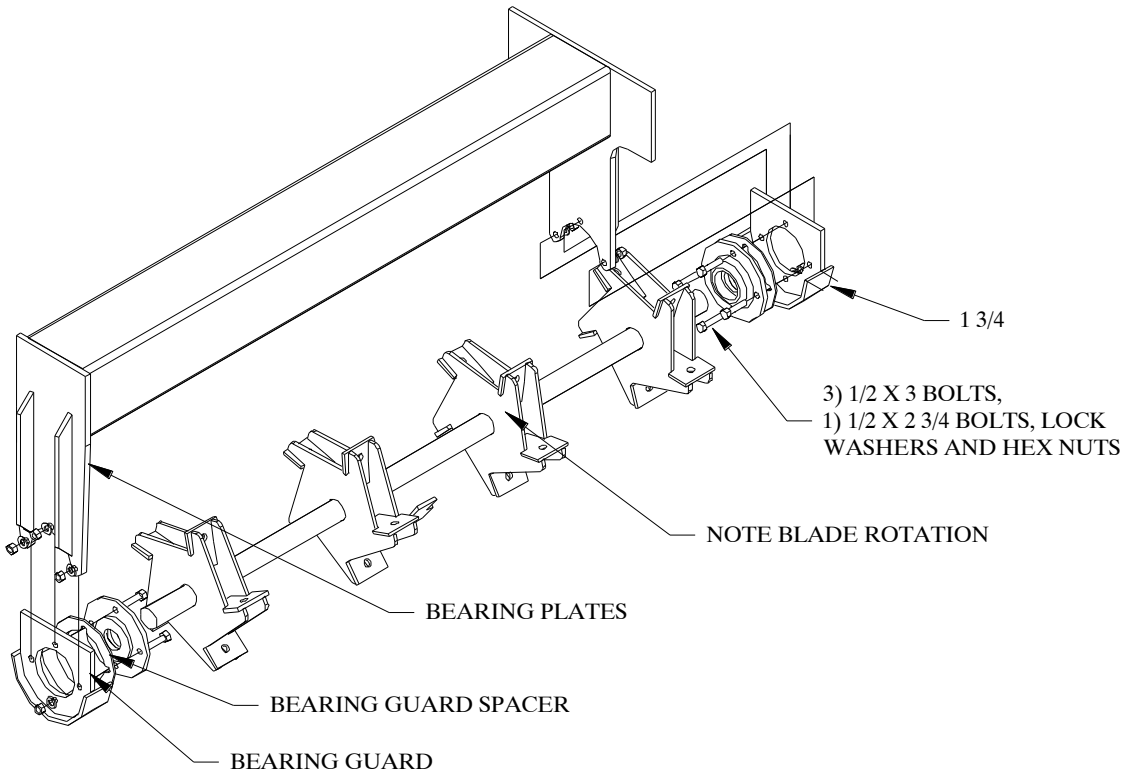
Install the Spiral Reel Assemblies

Note: When installing the Spiral Reels, make certain that the bearing lock collars are securely locked to the spiral reel shaft. The lock collar must be rotated into the right position in order to slide the bearing onto the shaft. After the bearing and shaft are in place the lock collar can be turned to lock onto the shaft. When locking the lock collar onto the shaft make sure to turn the lock collar in the same direction of the rotation of the spiral reel.

1. Use the diagrams in appendix C to determine the placement of each spiral reel assembly.

2. Place the bearing on the end of the spiral reel shaft with the bolting face pointing outward and the grease fitting pointing upward. Make sure that the three 1/2" x 3" and one 1/2" x 2 3/4" bolts are in place. The 1/2" x 2 3/4" bolt should be placed on the bottom side of the bearing. Place a bearing guard spacer onto the bolting face of the bearing. Position the bearing guard with the 1 3/4" lip towards the center of the spiral reel and bolt into place with the 1/2 x 2 3/4" bolt.

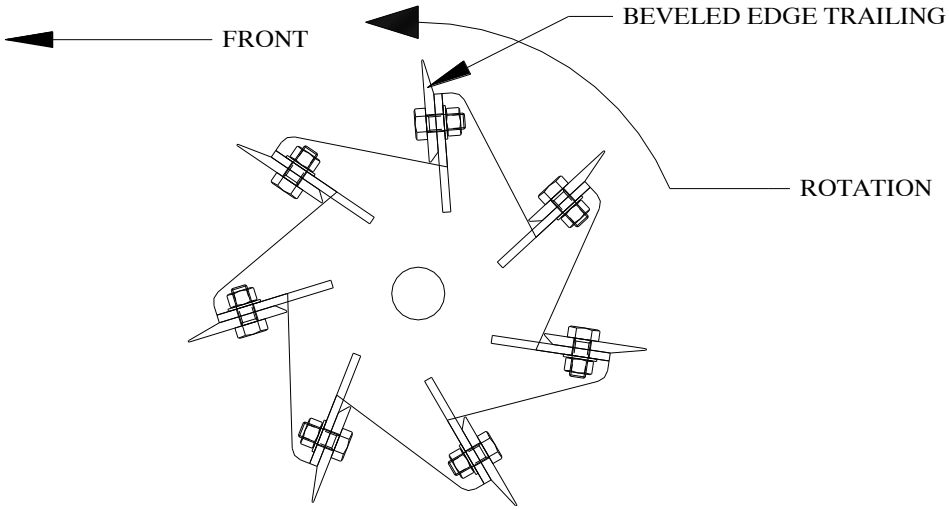
3. Position the spiral reel assembly between the two end plates of the spiral reel mounting assembly as shown. Be sure the blades are in the correct orientation. It may be necessary to hydraulically rotate the Center Bar and Wings to allow the Spiral Reels to be installed. For correct orientation, refer to the Cutter Blade Attachment and Replacement section.



Note: The bearings and bearing guards are mounted on the inside of the Bearing Plates with the bolts facing outward away from the spiral reel with the lock washers and nuts on the outside of the Bearing Plate. Also note that the bearing guard on the bottom of the Bearing Plate is mounted with the long (1 3/4") part of the guard toward the center of the Spiral Reel. Use three 1/2" x 3" bolts and one 1/2" X 2 3/4" bolt with lock washers and hex nuts.

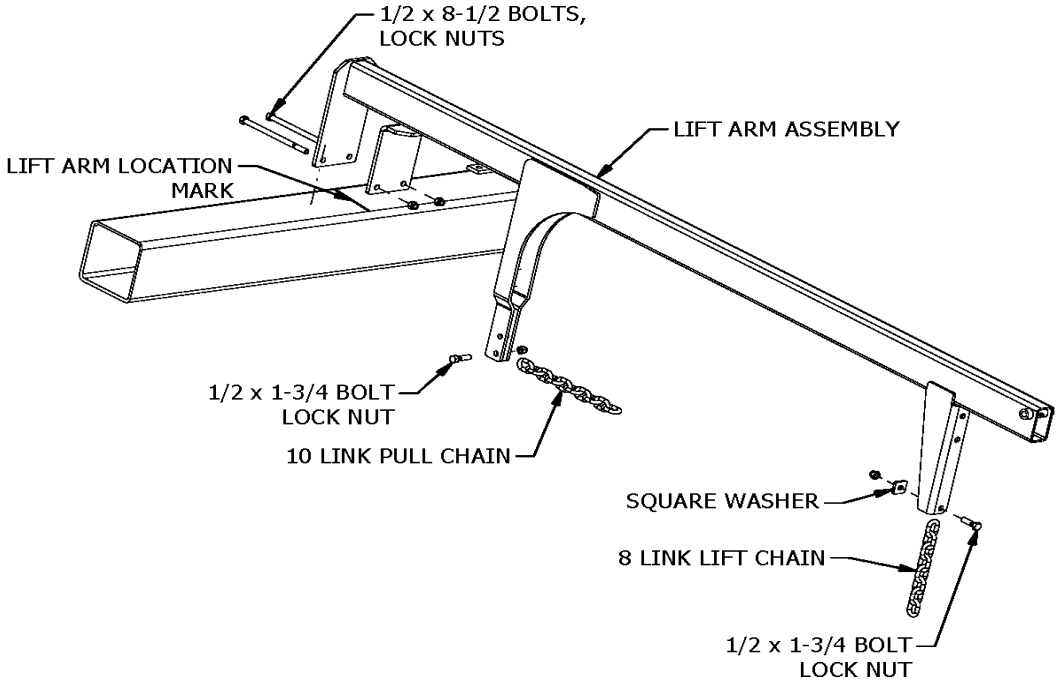
Cutter Blade Attachment and Replacement

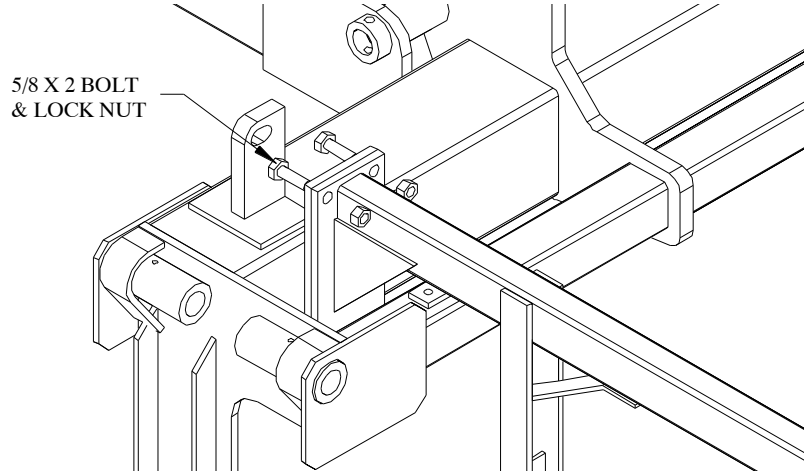
To replace a spiral cutter blade, simply remove the bolts that secure it to the reel bracket and replace with a new blade. Note the blade orientation.



Attach the Lift Arms

1. Refer to the layout diagrams in appendix C and determine which layout corresponds to your machine. Attach a Lift Arm in each location and bolt in place using the two 1/2" x 8 1/2" bolts and lock nuts for each lift arm. Note that the some of the Lift Arms closest to the hinge are bolted on using the 5/8" x 2" bolts and lock nuts as shown.
2. Bolt a 10 link chain to each of the pull points and an 8 link lift chain to the front side of the rear lift points. Use 1/2" x 1 3/4" bolts, square washers, and lock nuts, as shown.



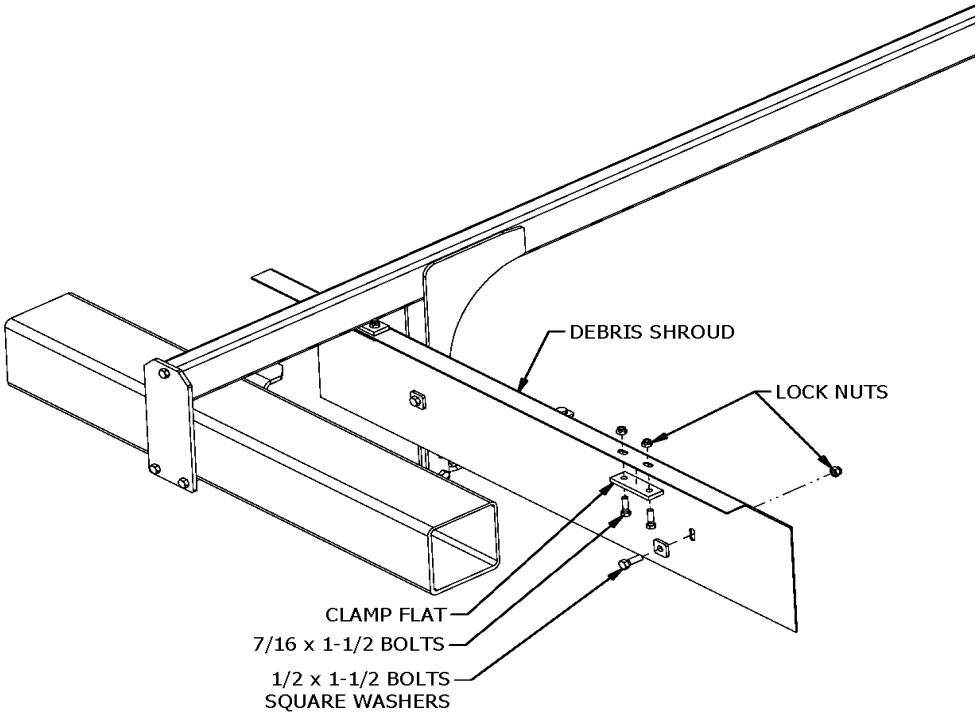


Attach the Debris Shrouds

1. Refer to the layout diagrams in appendix C and determine which layout corresponds to your machine. Be sure to identify the correct width of the machine, whether the reels are rigidly mounted or spring loaded and the type of sections. Position the Debris Shrouds in the proper place and attach to the Lift Arm using the 7/16" x 1 1/2" bolts and lock nuts with the clamp flats.

2. Attach the lower portion of the debris shroud using 1/2" x 1 1/2" bolts, lock nuts and square washers. Do Not Tighten until Brace Angles and Leveling Boards have been installed.

3. When both the top and back bolts have been installed, position the Debris Shroud so that it fits against the pull points and the lift arms, then secure the shroud in place.

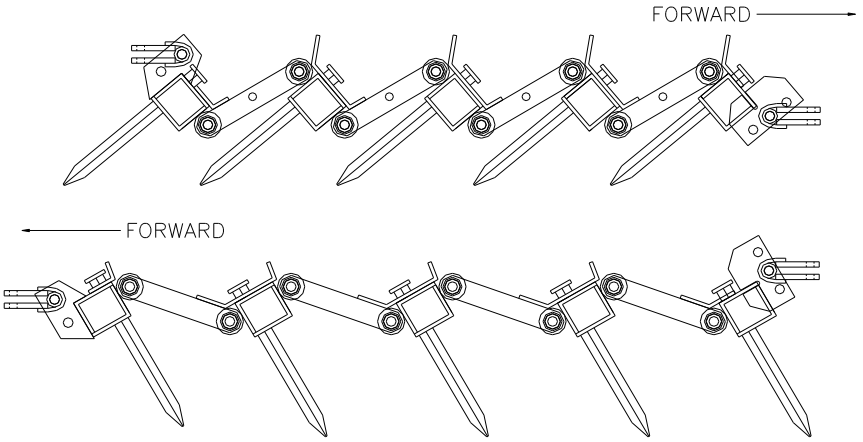


Harrow Identification

Harrow section identification is quite simple, the first two letters (FA) indicates the harrow type. The next number (500, 600,700, etc.) tells the number of teeth per bar (500 = 5 teeth per bar, 600 = 6 teeth per bar). And the last number (3 or 5) indicates the number of bars per section.

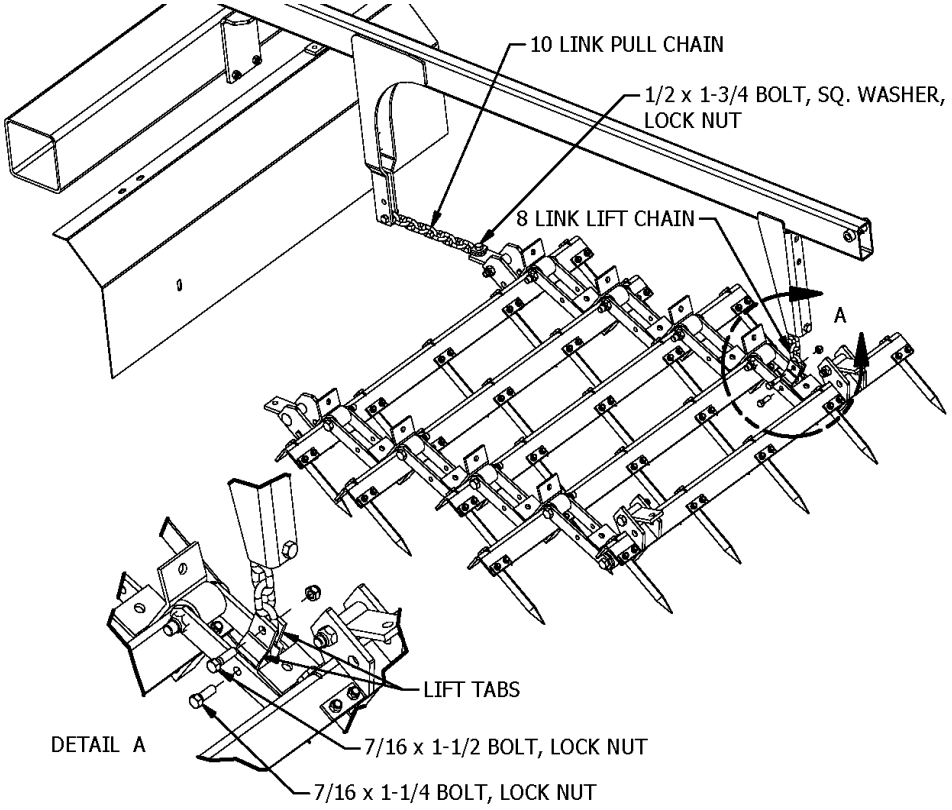
Angle of Attack

Before placing the harrows into their appropriate places, determine the angle of attack desired. The angle of attack can be changed by simply reversing the harrow sections and pulling them from the opposite end. The steeper the angle of attach, the more aggressive the harrowing will be. See the diagram on the next page. Note the direction of the caps when determining direction of pull.



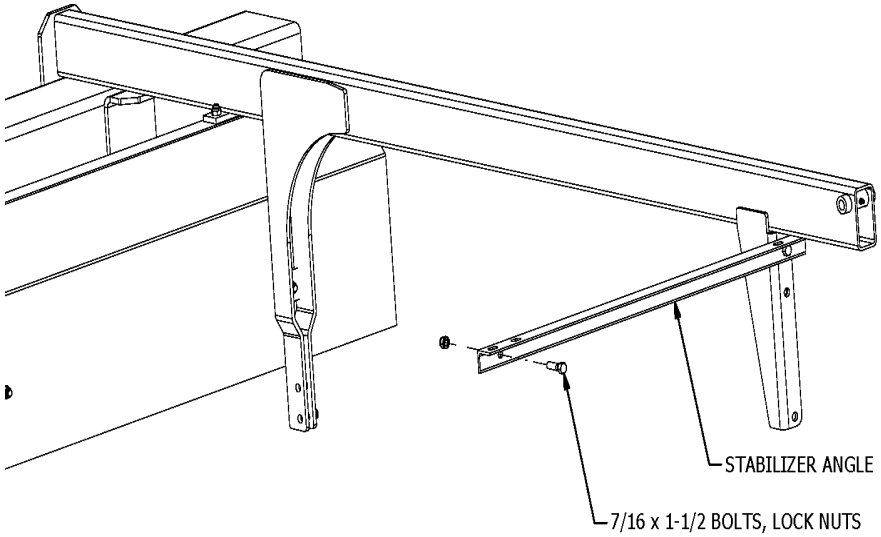
Attach the FA Harrow Sections

1. Position the harrow sections in their appropriate places. Refer to appendix C for harrow section layout. Be sure to use the correct unit width when determining section layout.
2. Once the harrow sections have been positioned in place, attach the 10 link pull chain and the 8 link lift chains as shown.



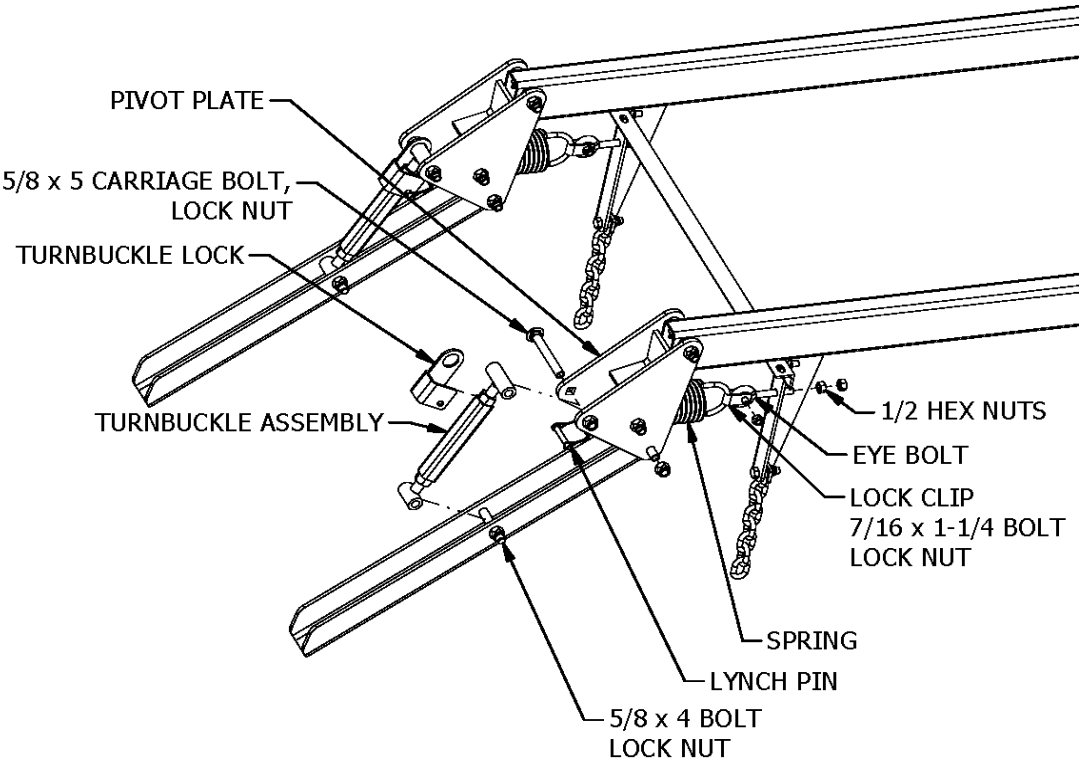
Attach the Stabilizer Angles

1. Refer to appendix C for stabilizer angle locations. The brace (stabilizer) angle should be attached to the lift arms so that the part of the angle that points toward the ground is toward the front of the lift arms. Use 7/16" x 1 1/2" bolts, lock washers and hex nuts. Do Not Tighten.



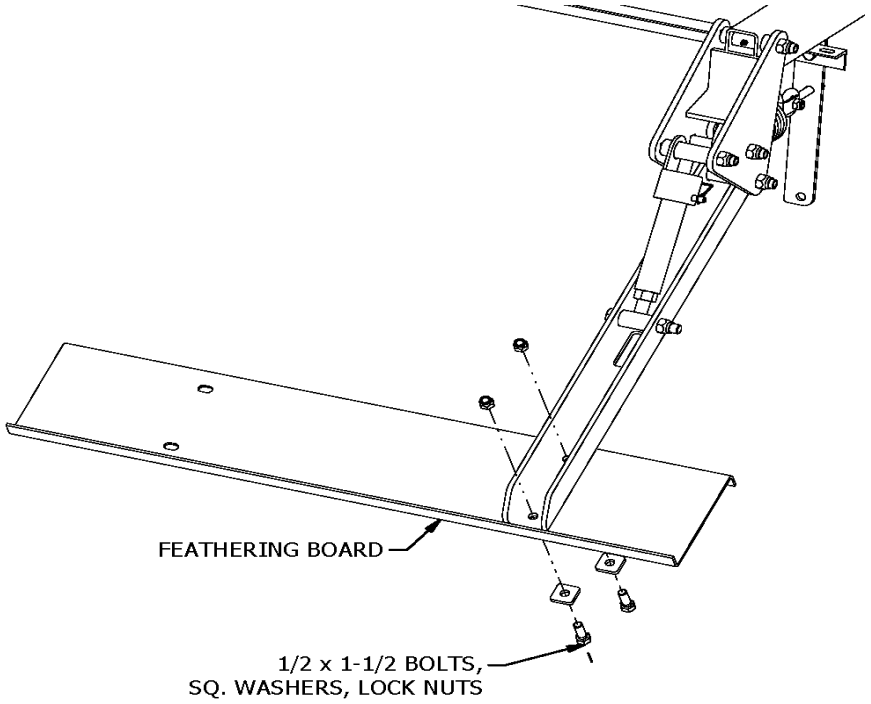
Attach the Pivot Plate and Swing Arm

1. Attach the Pivot Plate to the Lift Arm using a 5/8" x 5" carriage bolt and locking nut. The assembly should be able to rotate freely. Refer to the figure for proper orientation.
2. Attach the Swing Arm to the Pivot Plate using a 5/8" x 5" carriage bolt and locking nut. The Swing Arm should rotate freely. Refer to the figure for proper orientation.
3. Connect the Tension Spring to the Pivot Plate by hooking one end around a 5/8" x 5" carriage bolt in the center of the Pivot Plate. Slide the eyebolt through the bracket on the Lift Arm and secure it with two 1/2" hex nuts. Attach the front end of the spring to the eye-bolt using a lock clip and 7/16 x 1 ¼" bolt and lock nut. Be sure to put tension on the spring to prevent it from becoming disconnected.
4. Slide a Turnbuckle Lock over the long bushing on a Turnbuckle. Attach the Turnbuckle to the Pivot Plate using a 5/8" x 5" carriage bolt and locking nut. Attach the other end of the Turnbuckle to the Swing angle using a 5/8" x 4" bolt and locking nut. All pivot points should move freely. Secure the Turnbuckle Lock with a lynch pin.
5. Adjust the spring tension as needed in varying field conditions. Follow the directions in the operating instructions.



Attach the Feathering Board Option

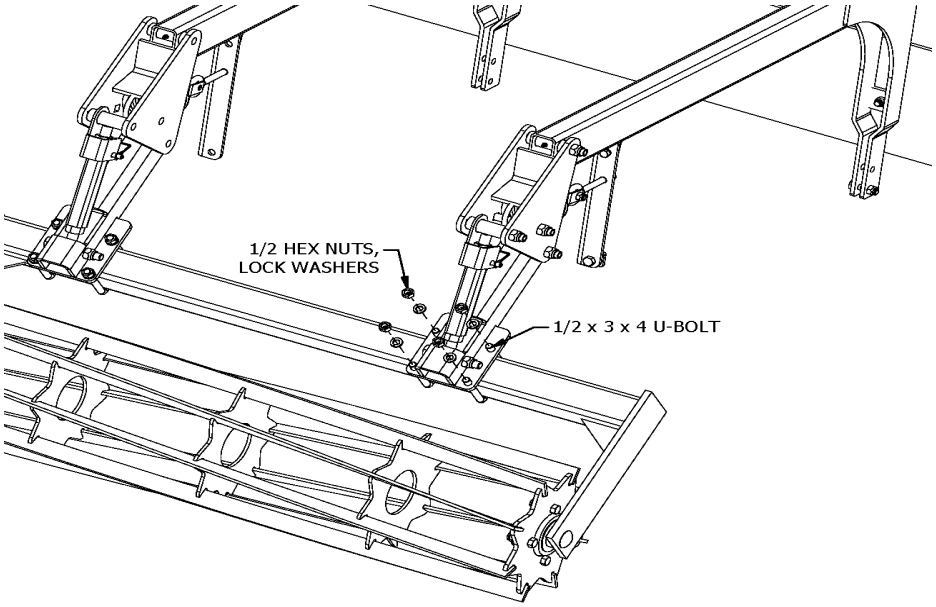
1. Refer to appendix C and be sure to use the layout with the correct width and section type. Using this diagram, position the Feathering Boards in their proper places. Attach them to the Pivot Arm assemblies using the 1/2" x 1 1/2" bolts, square washers and lock nuts.
2. Now that the Feathering Boards have been attached, go back and tighten all Lift Arm, Debris Shroud and Stabilizer Angle bolts.



Attach the Rolling Basket Option

1. Refer to the layout diagrams in appendix C for Rolling Basket placement. Be sure to use the layout with the correct unit. Also refer to the label on the Rolling Basket for proper direction of travel. Attach the Rolling Baskets to the Pivot Arm assemblies using the 1/2" x 3" x 4" U-bolts, lock washes and hex nuts.

2. Now go back and tighten all Lift Arm, Debris Shroud and Stabilizer Angle bolts.



Attach the Wing Cables

1. Make sure that the wings are in line with the center bar. Attach one end of the cable to the 3/4" x 8" eye-bolt with a 1/2" shackle. Secure the eye-bolt to the A-Frame using the 1 x 4 1/8 pin and the 3/16 x 2 cotter pins.

2. Pin the Wing Cable Brackets to the other end of the cable using the 1" x 2 1/2" clevis pins and cotter keys.

3. Stretch the Wing Cables out and using 5/8" x 2 1/2" bolts, lock washers and hex nuts, attach the Wing Cable Brackets to the Wing Tube. Be sure to mount outside of the tabs that are welded to the toolbar. Tighten all brackets as needed.

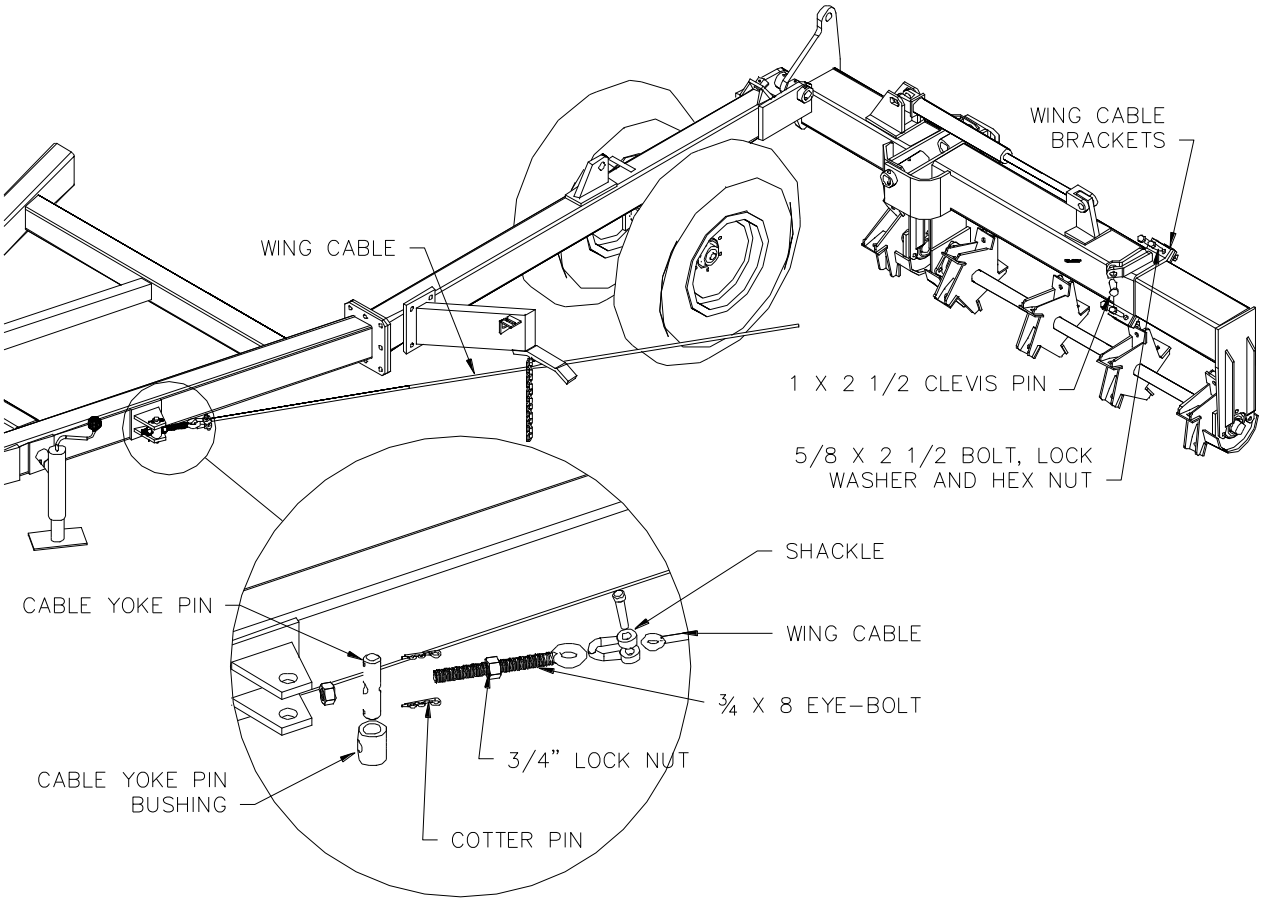
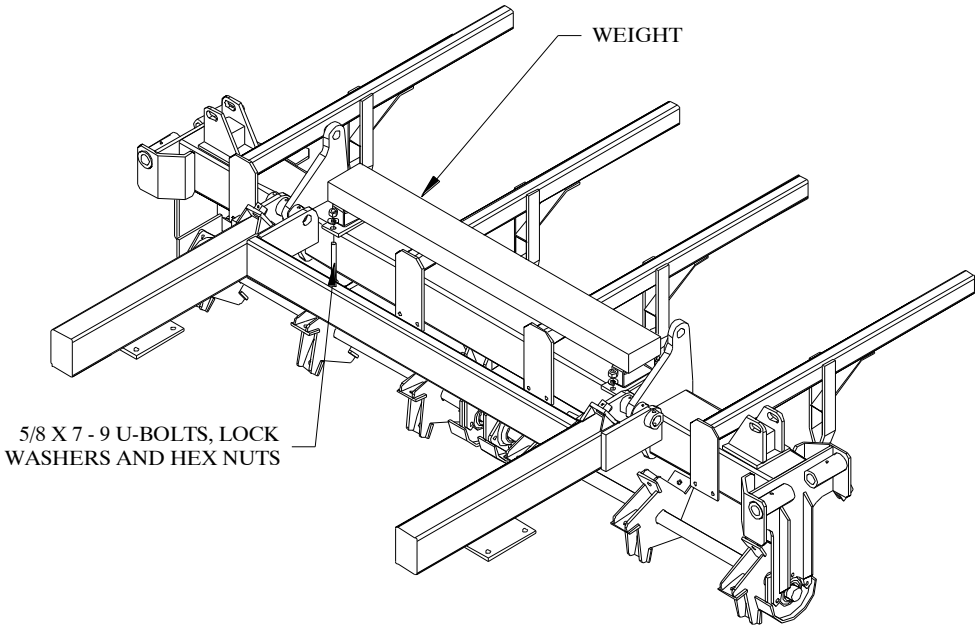


Figure 20

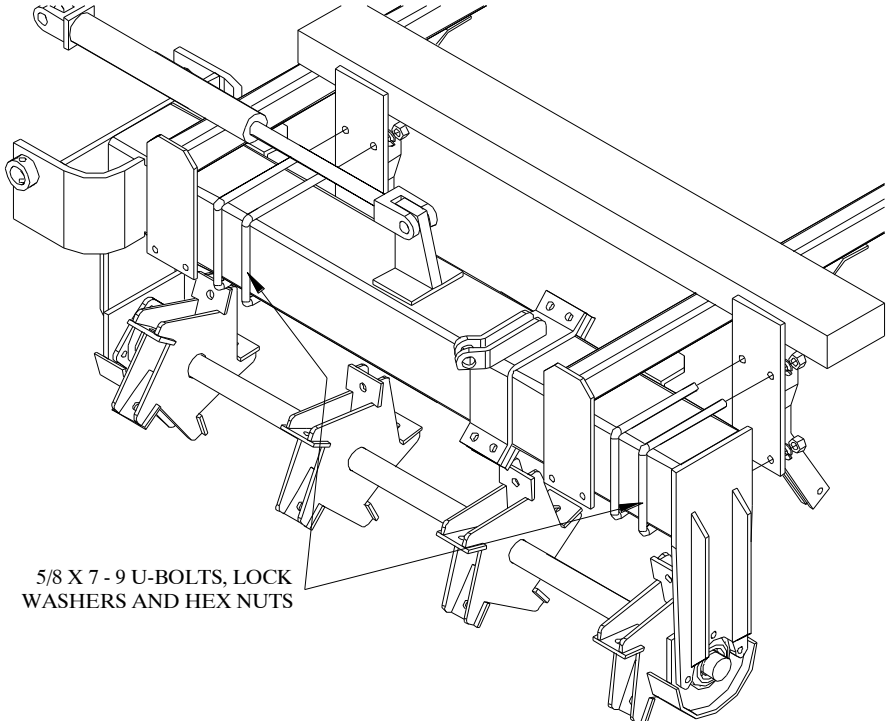
Attach the Center Bar Weight

1. Attach the weights to the center bar using the 5/8 x 7 - 9 U-bolts with lock washers and hex nuts. Weight size for the Center Bar is 3 x 6 - 56 inches long.



Attach the Wing Weights

1. Attach the wing weights to the wings using the 5/8 x 7 - 9 U-bolts with lock washers and hex nuts. Weight size for the wings depends on unit size. Note that on the SPR-1030 the wing weight mounts on the same as the center bar weight. The SPR-1020 and SPR-1026 Wing Weight Mount is shown below. For locations of the wing weights refer to the wing weight locations diagram in appendix C. Make sure to use the correct diagram for the unit being assembled.



Attach the Wing Cable Lift Assembly

1. Bolt the Cable Lift Bracket to the A-Frame just forward from the Wing Cable Bracket on the side of the A-Frame. Use four 1/2" x 4" x 7 1/4" (models 1020 through 1030) or 1/2" x 4" x 9 1/4" (models 1036 and 1040) U-bolts, lock washers and hex nuts. Do Not Tighten Yet. Note that there is a right hand and left hand assembly.

1. Attach the cable lift spring to the tabs on the cable lift bracket and the cable lift angle. Use the lock clips and 7/16" x 1-1/4" bolts with lock nuts.

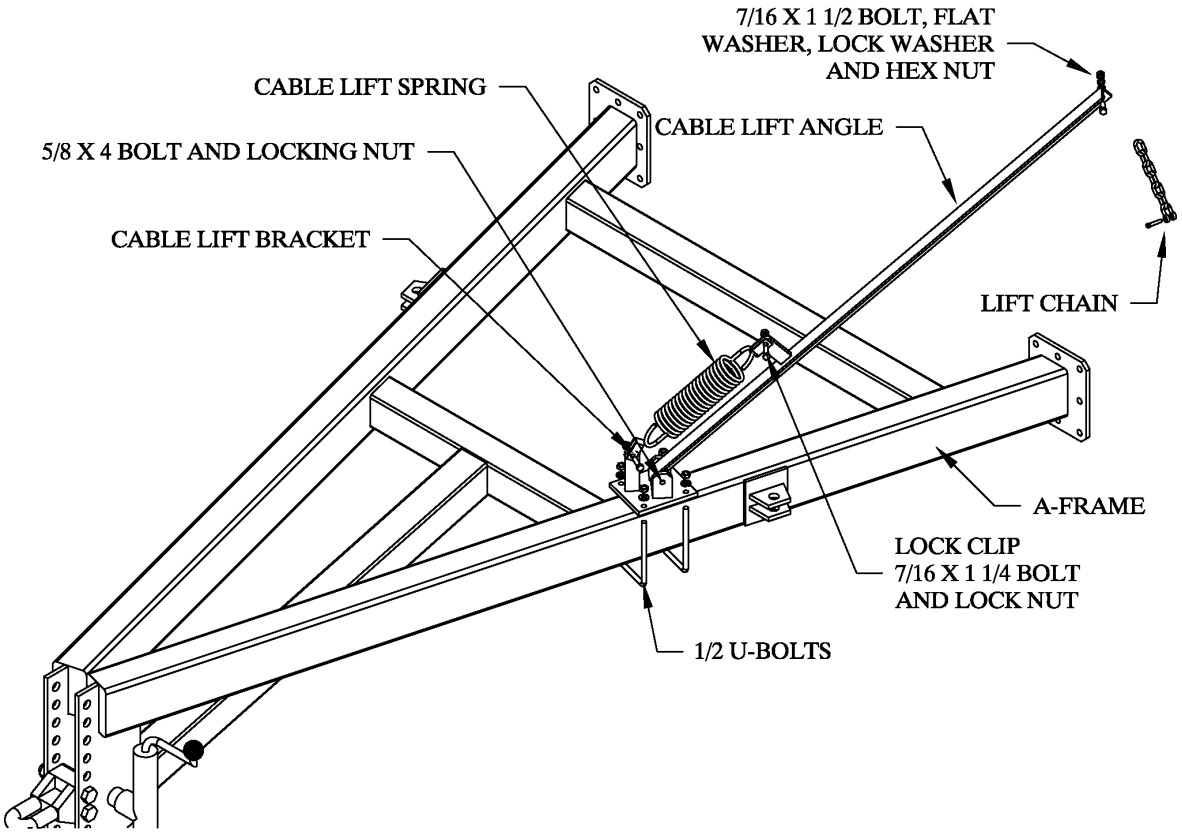
3. Carefully maneuver the Cable Lift Tube in between the tabs on the Cable Lift Bracket, then move the Cable Lift Tube up so that the 5/8" x 4" bolt and locking nut can be installed.

4. Attach the 1/4" x 15 link lift chain to the Cable Lift Angle with a 7/16 x 1 1/2 bolt, flat washer, lock washer and hex nut.

5. Adjust the assembly so the chain on the Cable Lift Tube hangs directly above the cable when the cable is pulled tight.

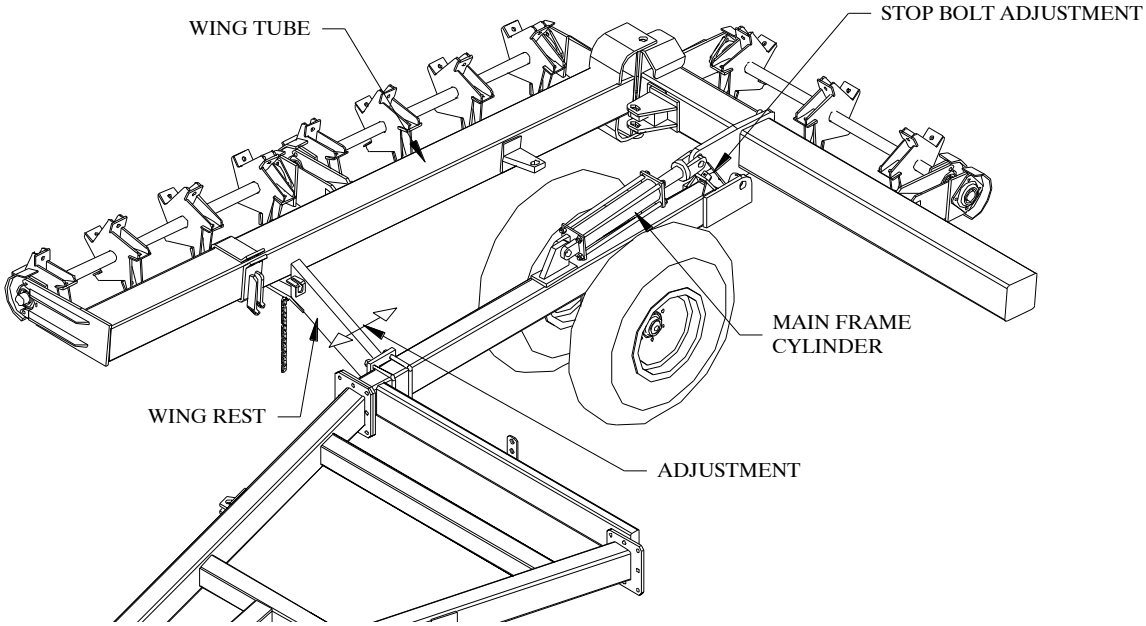
6. Attach the Cable Lift Assembly to the wing cable using the shackle on the end of the chain on the Cable Lift Tube.

7. When the unit is in the Transport position, the cable should be off the ground. If it is not, move the Cable Lift Assembly towards the front of the unit until it is off the ground.



Adjust the Wing Rests

Adjust the position of the wing rests so that they provide support to the wings while in the transport position. Move them either backward or forward on the square frame until the wings rest solidly on the wing rest plate. If necessary, adjust the clevis on the main frame cylinder in/out to move the wings up/down. Adjust the stop bolt tight against main hinge plate when the unit is in the transport position and secure with the jam nut. Main hinge plate stop bolt MUST be adjusted AFTER cylinder has been adjusted. When adjusted properly, tighten all bolts. Be sure to wrap the chains around the wing tubes for security during transport.



Attaching the Lights

1. With the unit in the field position, lay out the wire harness wishbone. The wishbone has a four pin plug in the middle and is split with three pin plugs on each end. The three pin plug connects to the lights. Lay the wishbone out on the tool bar, following across to the first lift arm of each wing. Do not attach to the frame yet.

2. Lay out the wire harness extension with the seven pin connector. Start by plugging it into the wire harness wishbone that is laid out on the tool bar. Work towards the hitch, following along the rear cross tube to the hydraulic cylinder and then along the hydraulic hoses. Do not attach to the hydraulic hoses yet. Make sure there is plenty of slack to connect to the towing vehicle. The wire harness may need to be pulled towards the hitch and the rear connection point moved to one side.

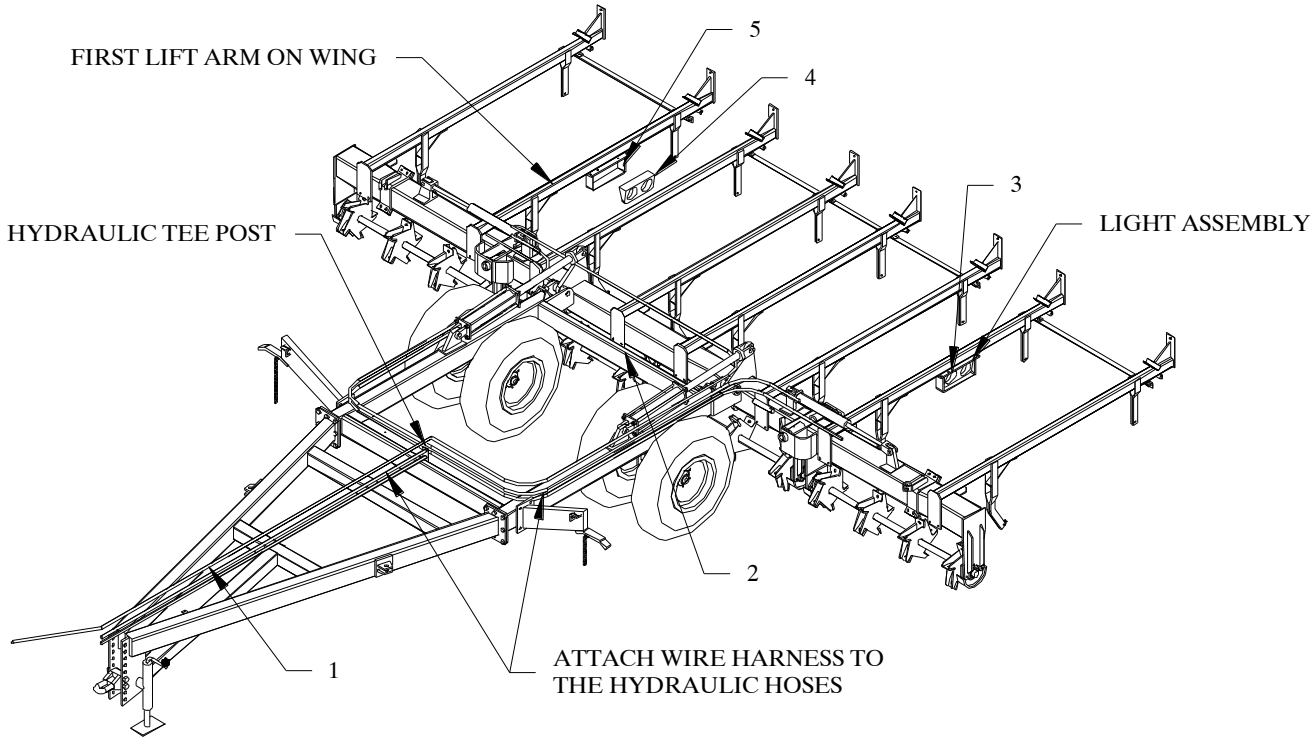
3. Mount the lights into the mounting brackets by using the 1/4 x 1 1/4 bolts, flat washers, lock washers and hex nuts.

4. Attach the light assemblies to the first lift arm on the wings using the 3/8 x 2 - 5 U-Bolts, lock washers and hex nuts. Do not tighten yet. You may have to adjust the location later. The lights must be attached so that the red and yellow lens will be facing towards the center of the unit with the yellow light towards the rear of the unit. The single yellow lens will be facing away from the center of the unit. Connect the free end of the wishbone to the lights.

5. Now that the lights have been mounted and the wires run, attach wire harnesses to the frame and hydraulic hoses with zip ties. Be sure to leave slack at the hinge points to prevent the wire harness from becoming entangled. Also, securely attach the wire harness to the lift arm and next to the light assembly.
6. Tighten the light assemblies to the lift arms.

7. Check to make sure that all the plugs are properly and securely connected and the wire harnesses will not become entangled during operation or when the unit is folded into transport position.

8. Attach the unit to a tractor and plug in the lights. Check to make sure that they are working properly and that the wires do not pull or get caught when folding the unit into the transport position. With the unit in transport position, the red and yellow lights should be visible from the rear. The red light should be closest to the ground.



Final Adjustments

1. Unfold the unit into the field position.
2. Pull the completed unit ahead a few feet to check that everything is properly assembled and that nothing is binding or misaligned.
3. Check to make sure that all bolts and fasteners are tight.
4. With the unit in the transport position, attach the red and amber reflectors at the widest visible points. The red reflectors should be visible from the rear of the unit, and the amber reflectors should be visible from the front of the unit.
5. Do not detach the unit from the tractor unless the jack stand is down and the wings are secured in the wing rests.

6. After the first few hours of operation, check all fasteners and tighten if necessary. Include wheel lugs.

This completes the assembly of your spiral reel stalk chopper. Before using the unit, double check that all components have been assembled properly. If there are any questions regarding any of the assembly steps, contact your local dealer for an explanation. Do not operate this or any equipment unless you are sure that all components operate as they were designed to operate.

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
Hydraulics actuate too rapidly	Hydraulic restrictors not installed	Install hydraulic restrictors
Wings will not slide into wing rests	Wing rests improperly positioned	Reposition wing rests
	Main hinge plate stop bolt maladjusted	Readjust hinge plate stop bolt
Excessive clogging during operations	Angle of attack too steep	Pull harrow sections from the other end
	Ground speed too low	Increase ground speed to 6 - 9 mph

BOLT TORQUE SPECIFICTIONS

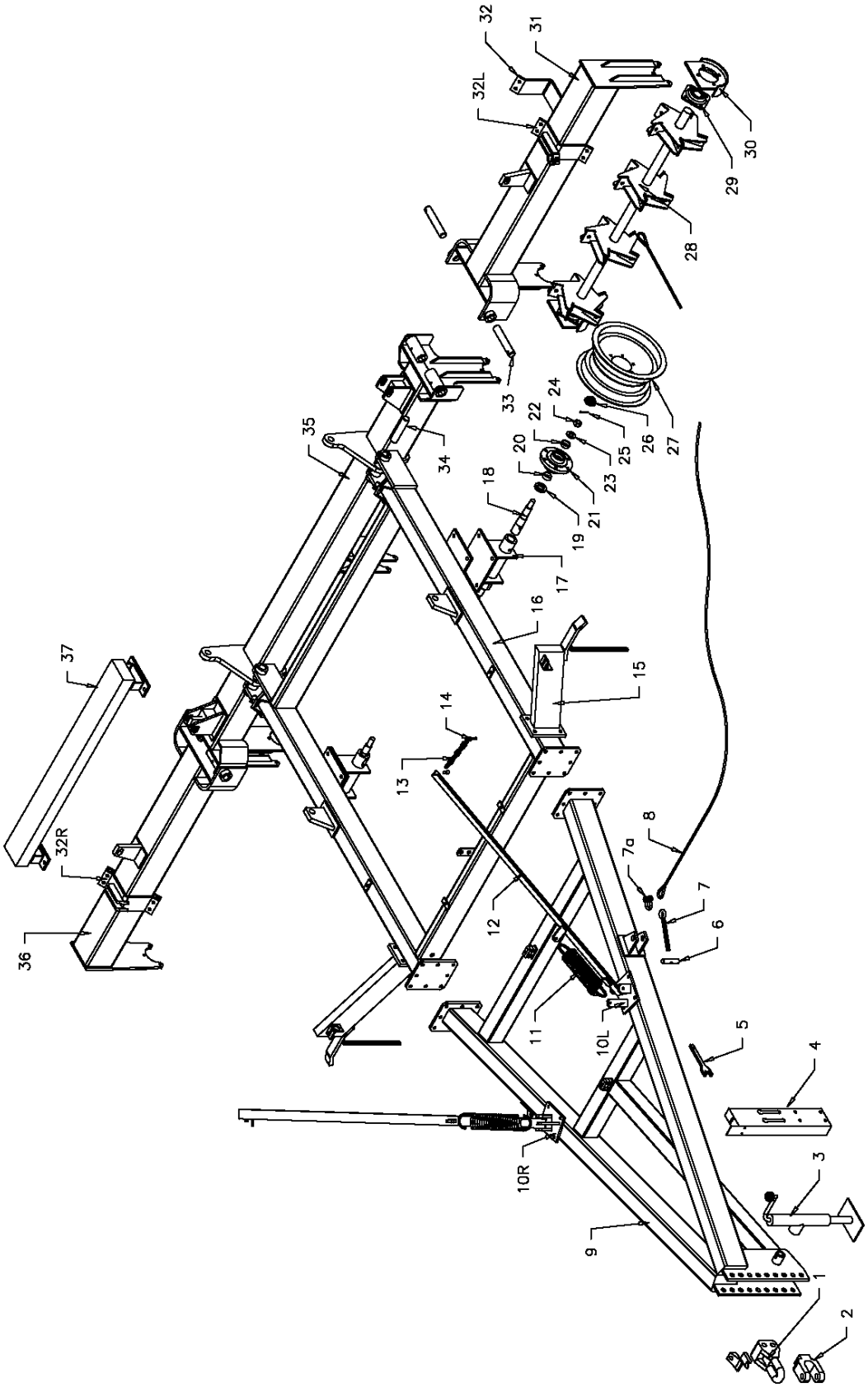
Coarse Thread Series		
Nut Size and Threads per Inch	Nut Tightening Torque (lb.ft.)	
Grade C Nuts		
	Max.	Min.
1/4 - 20	14.7	10
5/16 - 18	22.3	15.2
3/8 - 16	39	28
7/16 - 14	60	44
1/2 - 13	88	63
9/16 - 12	134	98
5/8 - 11	172	127
3/4 - 10	295	218
7/8 - 9	440	317
1 - 8	651	506

Fine Thread Series		
Nut Size and Threads per Inch	Nut Tightening Torque (lb.ft.)	
Grade C Nuts		
	Max.	Min.
1/4 - 28	14.7	10
5/16 - 24	23.4	18.4
3/8 - 24	41	30
7/16 - 20	60	44
1/2 - 20	98	70
9/16 - 18	134	98
5/8 - 18	176	127
3/4 - 16	295	218
7/8 - 14	440	317
1 - 14	703	610

WHEEL LUG TORQUE SPECIFICTIONS

Tire Size	Lug Size	Lug Tightening Torque (lb.ft.)	
		Max.	Min.
18.5X8.5-8	½ nut	85	75
7.60-15	½ x 1	85	75
9.5L-15	½ x 1	90	80
11L-15	½ x 1	90	80
12.5L-15	9/16 x 1	90	80
13X13.5-15	9/16 x 1	90	80
425/65R 22.5	3/4 nut	90	80

SPR-1020 THROUGH 1030 SPIRAL REEL STALK CHOPPER
PARTS DIAGRAM



SPR-1020 THROUGH 1030 SPIRAL REEL STALK CHOPPER
PARTS LIST

Always order by Part Number - *Not* by Key Number

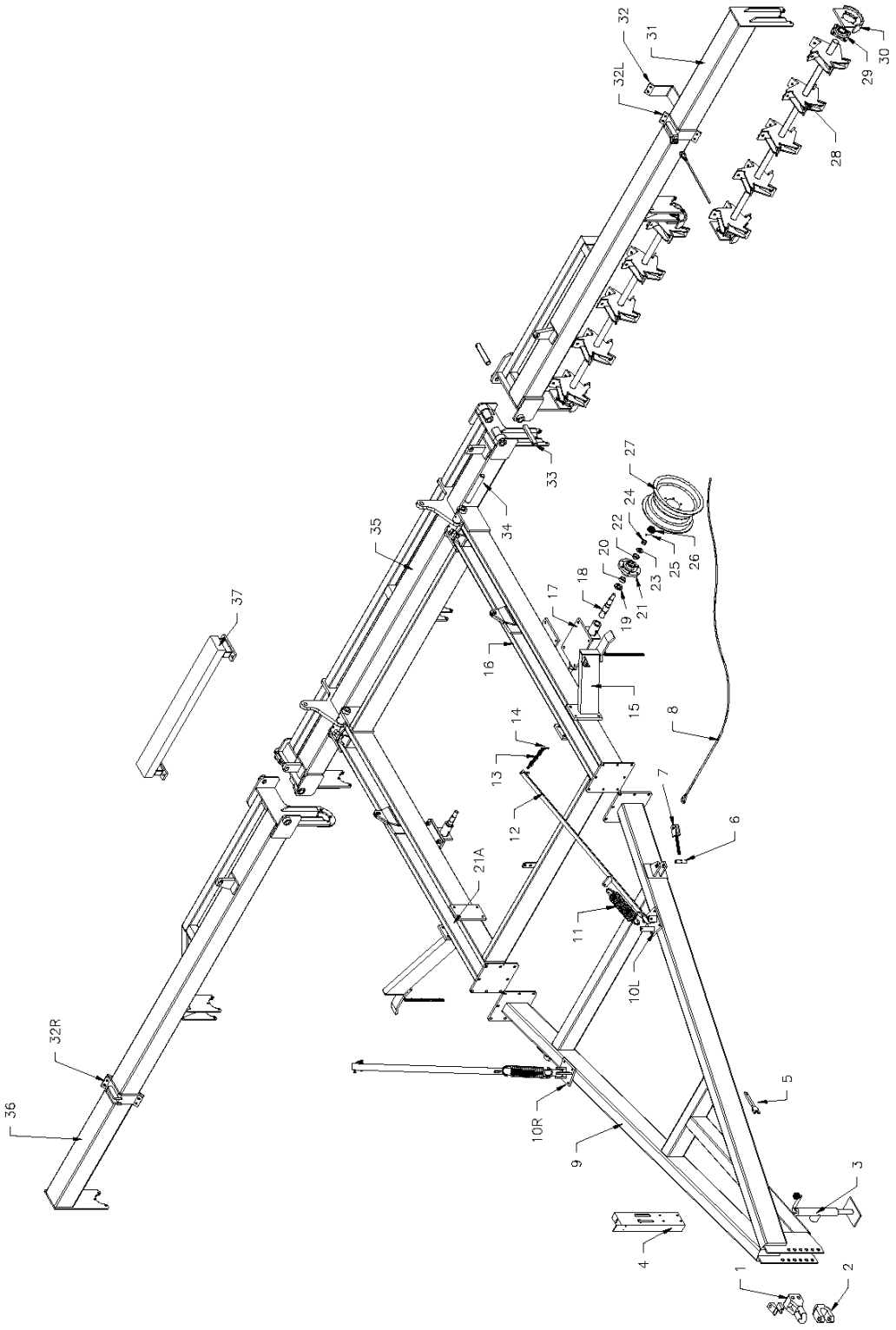
KEY		DESCRIPTION	QTY.
1	PPI-200	BASE HITCH	1
2	PPI-208	HITCH CLEVIS	1
3	RT-3144	JACK	1
4	LB-1105	HOSE RACK	1
5	RT-2416	FEATHERING BOARD TURBUCKLE WRENCH	1
6	SPR-2715	1” X 4 1/8” CABLE YOKE PIN	2
**	SPR-2719	CABLE YOKE PIN BUSHING	2
**	CP-3620	3/16” X 2” COTTER PIN	4
7	EB-3408	EYE-BOLT, 3/4 X 8	2
7a	HDL-215	SHACKLE, 1/2”	2
8	WC-8140	WING CABLE, 140” (SPR-1020)	2
**	WC-8152	WING CABLE, 152” (SPR-1026)	2
**	WC-8180	WING CABLE, 180” (SPR-1030)	2
9	SPR-2115	A-FRAME, 1026-1030	1
	11496	A-FRAME, 1020 ONLY	1
**	RT-2054	SAFETY CHAIN BUSHING	1
**	12504	SAFETY CHAIN	1
**	RT-3103	SAFETY CHAIN WASHER	1
10L	HDL-2540	LEFT HAND CABLE LIFT ARM BASE	1
10R	HDL-2541	RIGHT HAND CABLE LIFT ARM BASE	1
11	PH-10	CABLE LIFT ARM SPRING	2
12	HDL-2542	CABLE LIFT ARM ANGLE	2
13	CH-1415	CABLE LIFT CHAIN	2
14	AL-030	CABLE LIFT CHAIN ANCHOR SHACKLE	2
15	SPR-2523	WING REST (6”)	2
16	SPR-2200	SQUARE FRAME	1
17	SPR-2250	AXLE ASSEMBLY	2
18	WDL-2505	SPINDLE	4
19	HD-1360	GREASE SEAL (6 HOLE HUB)	2
20	HD-1362	INNER BEARING (6 HOLE HUB)	4
21	HD-1361	HUB WITH RACES (6 HOLE HUB)	4
22	HD-1363	OUTER BEARING (6 HOLE HUB)	4
23	HD-1364	SPINDLE FLAT WASHER (6 HOLE HUB)	4
24	HD-1365	SPINDLE HEX NUT (6 HOLE HUB)	4
25	CP-1517	COTTER PIN	4
26	HD-1367	DUST CAP	4
27	HD-1368	RIM (15” X 8” - 6 HOLE) for 11L-15 tire	4
**	HD-1371	COMPLETE HUB ASSEMBLY	4
28	RT-3351	SPIRAL REEL BRACKET, 51” BLADES	*
**	RT-3358	SPIRAL REEL BRACKET, 58” BLADES	*
**	RT-3372	SPIRAL REEL BRACKET, 72” BLADES	*
**	RT-3380	SPIRAL REEL BRACKET, 80” BLADES	*

**	RT-3395	SPIRAL REEL BRACKET, 95” BLADES	*
**	SPR-5051	SPIRAL REEL BLADE, 51”	*
**	SPR-5058	SPIRAL REEL BLADE, 58”	*
**	SPR-5072	SPIRAL REEL BLADE, 72”	*
**	SPR-5080	SPIRAL REEL BLADE, 80”	*
**	SPR-5095	SPIRAL REEL BLADE, 95”	*
29	SPR-5105	SPIRAL REEL BEARING ASSEMBLY	*
**	SPR-5106	SPIRAL REEL BEARING HOUSING	*
**	SPR-5107	SPIRAL REEL BEARING INSERT	*
30	SPR-2350	SPIRAL REEL BEARING GUARD	*
**	SPR-2351	SPIRAL REEL BEARING GUARD SPACER	*
31	11141	FRAME, WING, LT (SPR-1020)	1
**	11143	FRAME, WING, LT (SPR-1026)	1
**	11138	FRAME, WING, LT (SPR-1030)	1
32L	SPR-2750	WING CABLE BRACKET, LT	1
32R	SPR-2751	WING CABLE BRACKET, RT	1
**	HD-1149	1” X 2 1/2” CLEVIS PIN	2
32	SPR-2752	WING CABLE BRACKET (BASE/CLAMP PLATE)	2
33	SPR-2712	WING HINGE PIN (8 5/16”)	4
34	HDL-2714	CENTER BAR HINGE PIN (7 1/16”)	2
35	SPR-2300	FRAME, TOOLBAR, CENTER	1
36	11142	FRAME, WING, LT (SPR-1020)	1
**	11144	FRAME, WING, LT (SPR-1026)	1
**	11139	FRAME, WING, LT (SPR-1030)	1
37	SPR-2156	WEIGHT BRACKET, CENTER FRAME (1020,1026,1030)	1
**	SPR-2256	WEIGHT BRACKET, WING FRAME (1020, 1026)	2
**	SPR-2124	WEIGHT BRACKET, WING FRAME (1030)	2
**	SPR-2148	WEIGHT BRACKET, WING FRAME (1030)	2

*	Quantity depends on harrow sections used.
**	Unnumbered items are not pictured.
***	Please specify model number when ordering these parts.

McFarlane Manufacturing reserves the right to change specifications of design at any time without obligation to modify previous products.

SPR-1036 THROUGH 1040 SPIRAL REEL STALK CHOPPER
PARTS DIAGRAM



SPR-1036 THROUGH 1040 SPIRAL REEL STALK CHOPPER
PARTS LIST

Always order by Part Number - *Not* by Key Number

KEY		DESCRIPTION	QTY.
1	PPI-300	BASE HITCH	1
2	PPI-208	HITCH CLEVIS	1
3	RT-3144	JACK	1
4	LB-1105	HOSE RACK	1
5	RT-2416	LEVELING BOARD TURBUCKLE WRENCH	1
**	RT-2054	SAFETY CHAIN BUSHING	1
**	CH-1816	SAFETY CHAIN	1
**	RT-3103	SAFETY CHAIN WASHER	1
6	SPR-2715	1” X 4 1/8” CABLE YOKE PIN	2
**	SPR-2719	CABLE YOKE PIN BUSHING	2
**	CP-3620	3/16” X 2” COTTER PIN	4
7	EB-3408	3/4” X 8” EYE BOLT	2
**	SPR-2718	CABLE YOKE SPACER	2
**	HDL-215	1/2” ANCHOR SHACKLE	2
8	WC-2202	WING CABLE, 202”	2
9	SPR-2133	A-FRAME	1
10L	HDL-2540	LEFT HAND CABLE LIFT ARM BASE	1
10R	HDL-2541	RIGHT HAND CABLE LIFT ARM BASE	1
11	PH-10	CABLE LIFT ARM SPRING	2
12	HDL-2542	CABLE LIFT ARM TUBE	2
13	CH-1415	CABLE LIFT CHAIN	2
14	AL-030	CABLE LIFT CHAIN ANCHOR SHACKLE	2
15	SPR-2524	WING REST (8”)	2
16	SPR-2213	SQUARE FRAME	1
17	SPR-2251	AXLE ASSEMBLY	2
18	WDL-2505	SPINDLE	4
19	HD-1360	GREASE SEAL (6 HOLE HUB)	2
20	HD-1362	INNER BEARING (6 HOLE HUB)	4
21	HD-1361	HUB WITH RACES (6 HOLE HUB)	4
22	HD-1363	OUTER BEARING (6 HOLE HUB)	4
23	HD-1364	SPINDLE FLAT WASHER (6 HOLE HUB)	4
24	HD-1365	SPINDLE HEX NUT (6 HOLE HUB)	4
25	CP-1517	COTTER PIN	4
26	HD-1367	DUST CAP	4
27	HD-1368	RIM (15” X 8” - 6 HOLE) for 11L-15 tire	4
**	HD-1371	COMPLETE HUB ASSEMBLY	4
28	RT-3351	SPIRAL REEL BRACKET, 51” BLADES	*
**	RT-3358	SPIRAL REEL BRACKET, 58” BLADES	*
**	RT-3372	SPIRAL REEL BRACKET, 72” BLADES	*
**	RT-3380	SPIRAL REEL BRACKET, 80” BLADES	*
**	RT-3395	SPIRAL REEL BRACKET, 95” BLADES	*
**	SPR-5051	SPIRAL REEL BLADE, 51”	*
**	SPR-5058	SPIRAL REEL BLADE, 58”	*

**	SPR-5072	SPIRAL REEL BLADE, 72”	*
**	SPR-5080	SPIRAL REEL BLADE, 80”	*
**	SPR-5095	SPIRAL REEL BLADE, 95”	*
29	SPR-5105	SPIRAL REEL BEARING ASSEMBLY	*
**	SPR-5106	SPIRAL REEL BEARING HOUSING	*
**	SPR-5107	SPIRAL REEL BEARING	*
30	SPR-2353	SPIRAL REEL BEARING GUARD	*
31	11145	FRAME, WING, LEFT (SPR-1036)	1
**	11137	FRAME, WING, LEFT (SPR-1040)	1
32L	SPR-2750	WING CABLE BRACKET (L.H.)	1
32R	SPR-2751	WING CABLE BRACKET (R.H.)	1
**	HD-1149	1” X 2 1/2” CLEVIS PIN	2
32	SPR-2752	WING CABLE BRACKET (BASE/CLAMP PLATE)	2
33	SPR-2712	WING HINGE PIN (8 5/16”)	4
34	WDL-2714	CENTER BAR HINGE PIN (11 1/16”)	2
35	11135	FRAME, TOOLBAR, CENTER	1
36	11146	FRAME, WING, RT (SPR-1036)	1
**	11137	FRAME, WING RT (SPR-1040)	1
37	SPR-2156	WEIGHT BRACKET	3
**	SPR-2136	WEIGHT BRACKET	2

* Quantity depends on harrow sections used.

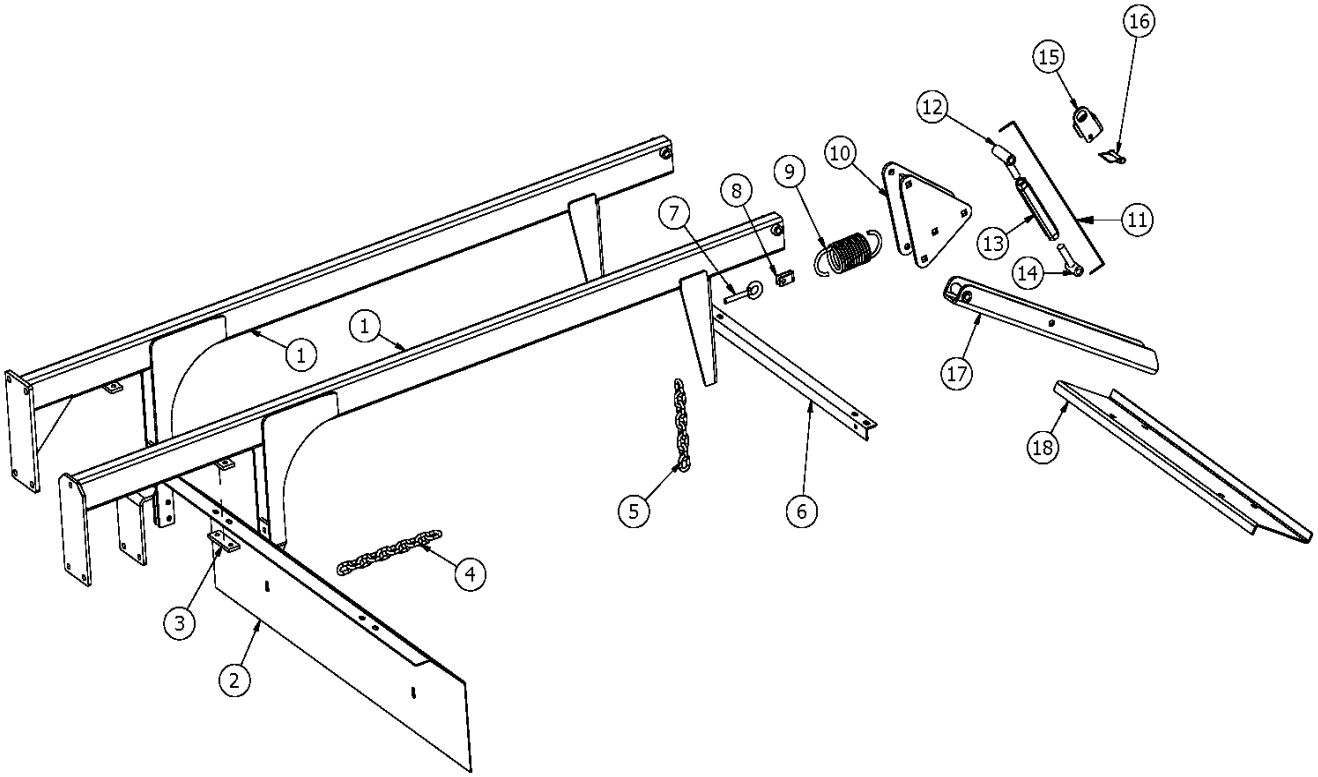
** Unnumbered items are not pictured.

*** Please specify model number when ordering these parts.

Bolts, washers, nuts, and cotter pins are not shown. Refer to the step-by-step assembly instructions for details.

McFarlane Manufacturing reserves the right to change specifications of design at any time without obligation to modify previous products.

5-BAR LIFT ARM & FEATHERING BOARD
PARTS DIAGRAM & LISTING

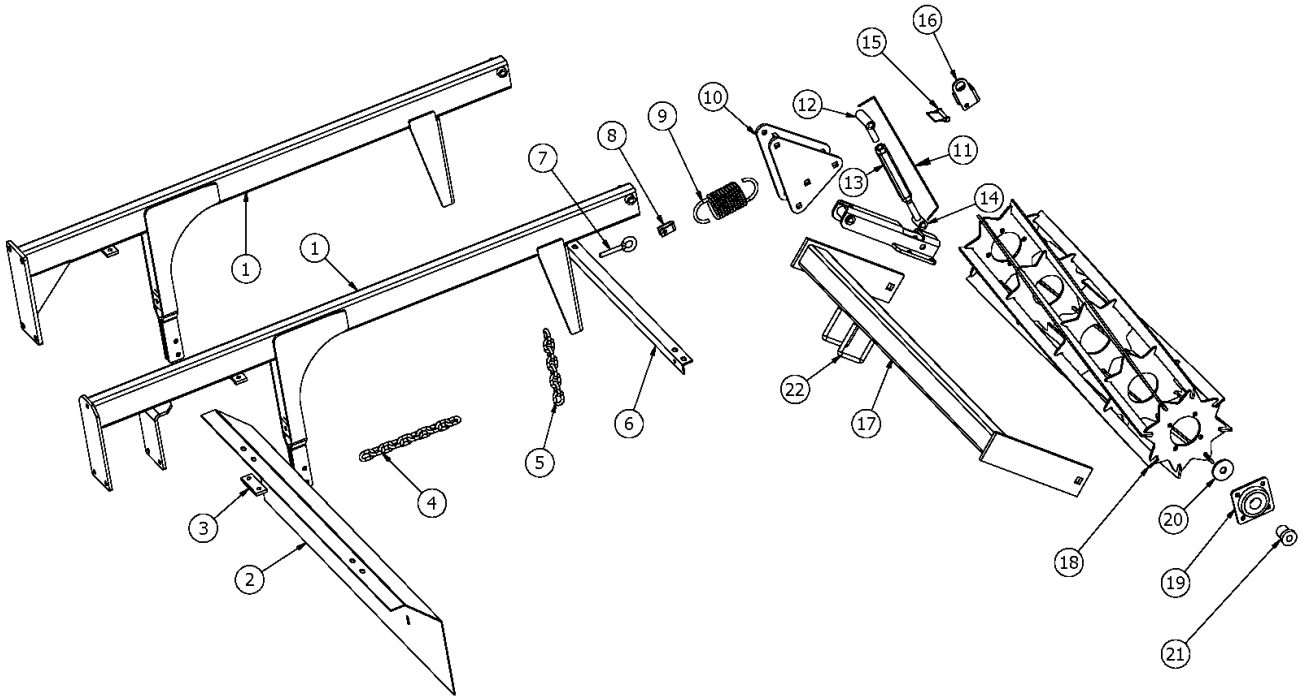


Key	Part No.	Description	Notes/Revisions
1	10389	LIFT ARM ASSEMBLY	
	10398	LIFT ARM ASSEMBLY, SHORT 5-BAR	
2	SPR-3054	DEBRIS SHROUD, SPR-54”	
	SPR-3065	DEBRIS SHROUD, SPR-65”	
	SPR-3076	DEBRIS SHROUD, SPR-76”	
	SPR-3087	DEBRIS SHROUD, SPR-87”	
	SPR-3098	DEBRIS SHROUD, SPR-98”	
3	SPR-2532	SHROUD CLAMP	
4	CH-0810	CHAIN 3/8, 10 LINK	
5	CH-0808	CHAIN 3/8, 8 LINK	
6	SPR-4035	BRACE ANGLE, FA-35-3/8”	
	SPR-4046	BRACE ANGLE, FA-46-3/8”	
	SPR-4057	BRACE ANGLE, FA-57-3/8”	
	SPR-4068	BRACE ANGLE, FA-68-3/8”	
	SPR-4079	BRACE ANGLE, FA-79-3/8”	
	SPR-4090	BRACE ANGLE, FA-90-1/4”	
	SPR-4112	BRACE ANGLE, FA-112-1/4”	
	SPR-4134	BRACE ANGLE, FA-134-1/4”	

	SPR-4166	BRACE ANGLE, FA-167-1/4” RT	
	SPR-4167	BRACE ANGLE, FA-167-1/4” LT	
7	EB-1203	EYE BOLT 1/2 x 3	
8	N-021	LOCK CLIP	
9	RBH-0308	SPRING 3 x 8	
10	10404	PIVOT PLATE ASSEMBLY	
11	RT-2417	FEATHERING BOARD TURNBUCKLE ASSEMBLY	
12	RT-2411	PIVOT END, TURNBUCKLE	
13	RT-2412	TURNBUCKLE TUBE	
14	RT-2413	ANGLE END, TURNBUCKLE	
15	RT-2415	TURNBUCKLE LOCK	
16	LP-3825	LYNCH PIN	
17	10396	FEATHERING BOARD SWING ARM	
18	SPR-2554	FEATHERING BOARD – 52”	
	SPR-2565	FEATHERING BOARD – 63”	
	SPR-2576	FEATHERING BOARD – 74”	
	SPR-2587	FEATHERING BOARD – 85”	
	SPR-2598	FEATHERING BOARD – 96”	

McFarlane Manufacturing reserves the right to change specifications of design at any time without obligation to modify previous products.

3- BAR LIFT ARM & ROLLING BASKET
PARTS DIAGRAM & LISTING

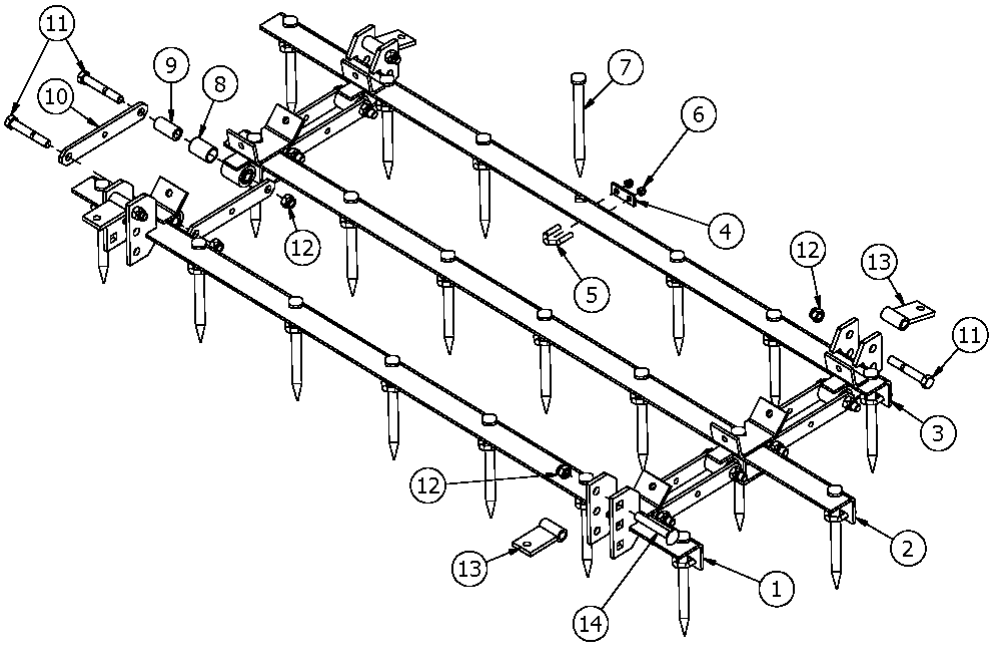


Key	Part No.	Description	Notes/Revisions
1	10400	LIFT ARM ASSEMBLY	
	10402	LIFT ARM ASSEMBLY, 3-BAR SHORT	
2	SPR-3054	DEBRIS SHROUD, SPR-54”	
	SPR-3065	DEBRIS SHROUD, SPR-65”	
	SPR-3076	DEBRIS SHROUD, SPR-76”	
	SPR-3087	DEBRIS SHROUD, SPR-87”	
	SPR-3098	DEBRIS SHROUD, SPR-98”	
3	SPR-2532	SHROUD CLAMP	
4	CH-0810	CHAIN 3/8, 10 LINKS	
5	CH-0808	CHAIN 3/8, 8 LINKS	
6	SPR-4035	BRACE ANGLE, FA-35-3/8”	
	SPR-4046	BRACE ANGLE, FA-46-3/8”	
	SPR-4057	BRACE ANGLE, FA-57-3/8”	
	SPR-4068	BRACE ANGLE, FA-68-3/8”	
	SPR-4079	BRACE ANGLE, FA-79-3/8”	
	SPR-4090	BRACE ANGLE, FA-90-1/4”	
	SPR-4112	BRACE ANGLE, FA-112-1/4”	
	SPR-4134	BRACE ANGLE, FA-134-1/4”	
	SPR-4166	BRACE ANGLE, FA-167-1/4” RT	
	SPR-4167	BRACE ANGLE, FA-167-1/4” LT	
7	EB-1203	EYE-BOLT 1/2 x 3	

8	N-021	LOCK CLIP	
9	RBH-0308	SPRING 3 x 8	
10	10404	PIVOT PLATE ASSEMBLY	
11	RT-2417	FEATHERING BOARD TURNBUCKLE ASSEMBLY	
12	RT-2411	PIVOT END, TURNBUCKLE	
13	RT-2412	TURNBUCKLE TUBE	
14	RT-2413	ANGLE END, TURNBUCKLE	
15	LP-3825	LYNCH PIN	
16	RT-2415	TURNBUCKLE LOCK	
17	SRB-1352	BASKET MOUNT – 52”	
	SRB-1363	BASKET MOUNT – 63”	
	SRB-1374	BASKET MOUNT – 74”	
	SRB-1385	BASKET MOUNT – 85”	
	SRB-1396	BASKET MOUNT – 96”	
18	SRB-1552	ROLLING BASKET – 52”	
	SRB-1563	ROLLING BASKET – 63”	
	SRB-1574	ROLLING BASKET – 74”	
	SRB-1585	ROLLING BASKET – 85”	
	SRB-1596	ROLLING BASKET – 96”	
19	DRB-3826	BASKET DISK BEARING	
20	SRB-1406	BASKET BEARING WASHER	
21	SRB-1408	BASKET BEARING INSERT	
22	BU-1234	U-BOLT, ½ X 2 X 3	

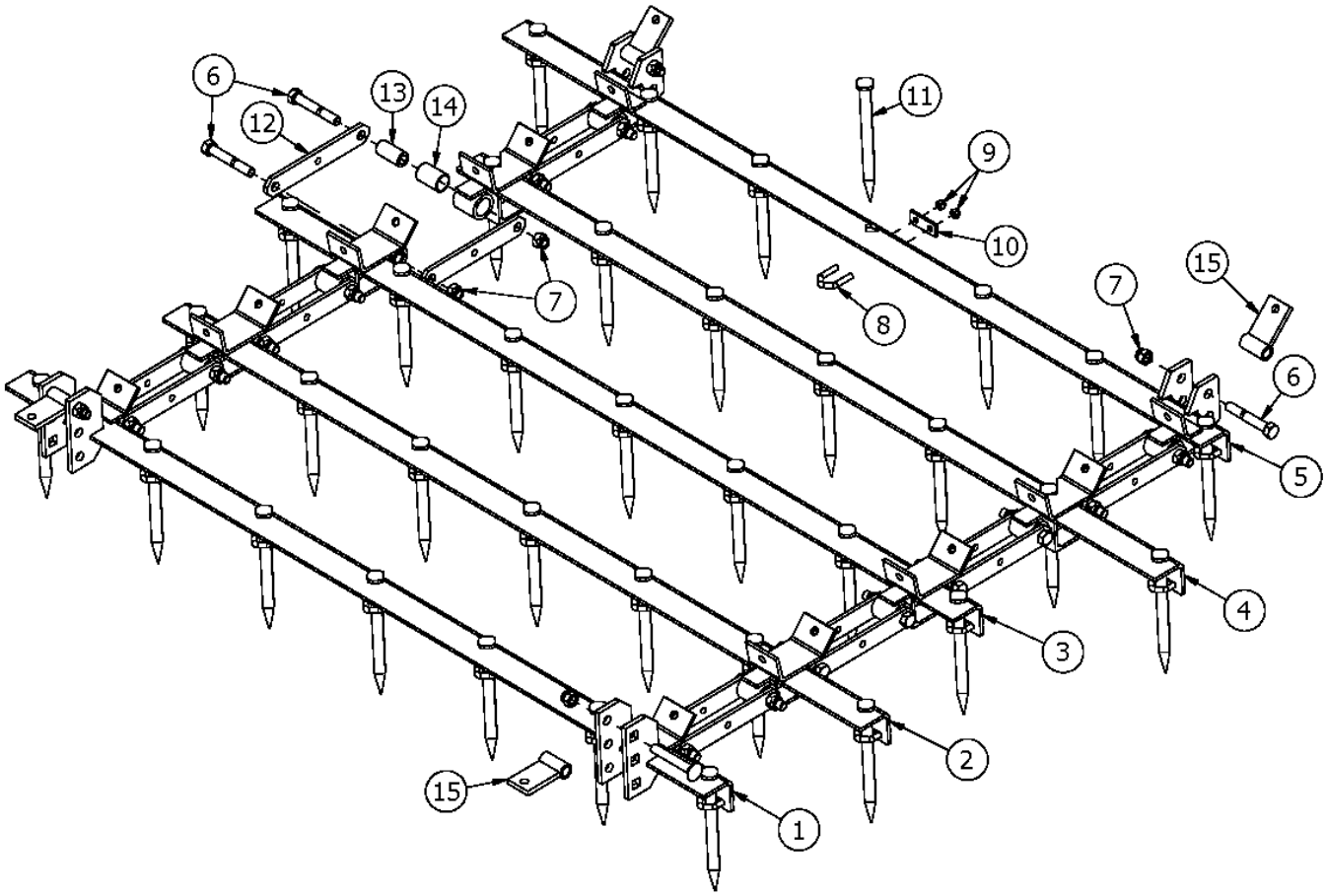
McFarlane Manufacturing reserves the right to change specifications of design at any time without obligation to modify previous products.

FA-3 BAR HARROW SECTIONS



KEY	PART #	DESCRIPTION
1	FA-551	#1 HARROW BAR (FA-500-3)
1	FA-651	#1 HARROW BAR (FA-600-3)
1	FA-751	#1 HARROW BAR (FA-700-3)
1	FA-851	#1 HARROW BAR (FA-800-3)
1	FA-951	#1 HARROW BAR (FA-900-3)
2	FA-556	#2 HARROW BAR (FA-500-3)
2	FA-656	#2 HARROW BAR (FA-600-3)
2	FA-756	#2 HARROW BAR (FA-700-3
2	FA-856	#2 HARROW BAR (FA-800-3)
2	FA-956	#2 HARROW BAR (FA-900-3)
3	FA-557	#3 HARROW BAR (FA-500-3)
3	FA-657	#3 HARROW BAR (FA-600-3)
3	FA-757	#3 HARROW BAR (FA-700-3)
3	FA-857	#3 HARROW BAR (FA-800-3)
3	FA-957	#3 HARROW BAR (FA-900-3)
4	FA-4103	3/8” V-BOLT PLATE
5	BV-3812	3/8” V-BOLT
6	NLT-3816	3/8” TOP LOCK NUT
7	FA-4110	3/4” X 10” TOOTH
8	CT-107	OUTER BUSHING
9	CT-102	INNER BUSHING
10	CT-105	CONNECTOR FLAT
11	BHP-6340	HEX BOLT PLAIN, 5/8 X 4
12	NLT-6311	5/8 TOP LOCK NUT
13	FA-4105	PULL HOOK
14	BC-6340	CARRIAGE BOLT, 5/8 X 4

FA-5-BAR HARROW SECTIONS

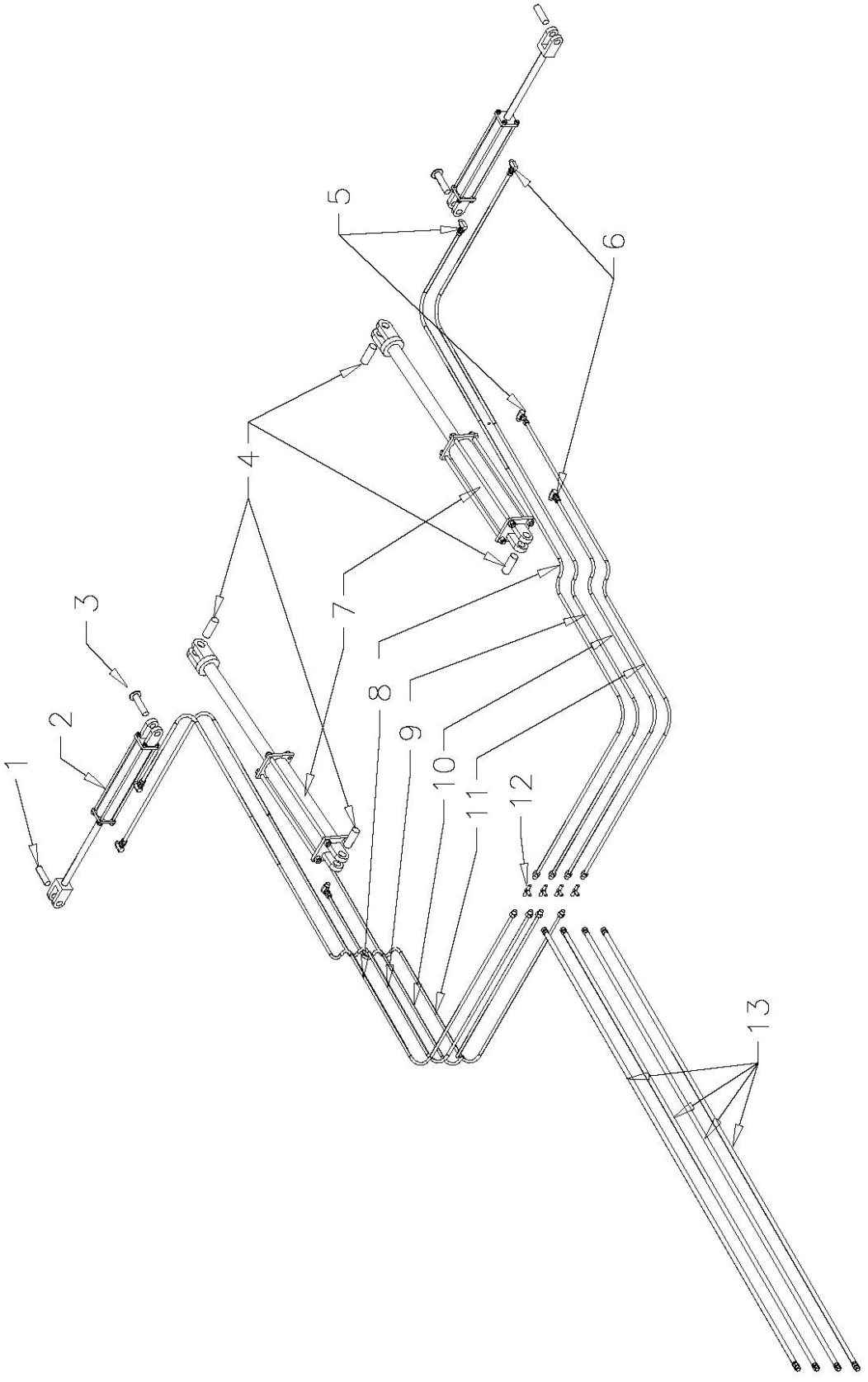


ITEM #	PART #	DESCRIPTION
1	FA-551	#1 HARROW BAR (FA-500-5)
1	FA-651	#1 HARROW BAR (FA-600-5)
1	FA-751	#1 HARROW BAR (FA-700-5)
1	FA-851	#1 HARROW BAR (FA-800-5)
1	FA-951	#1 HARROW BAR (FA-900-5)
2	FA-552	#2 HARROW BAR (FA-500-5)
2	FA-652	#2 HARROW BAR (FA-600-5)
2	FA-752	#2 HARROW BAR (FA-700-5)
2	FA-852	#2 HARROW BAR (FA-800-5)
2	FA-952	#2 HARROW BAR (FA-900-5)
3	FA-553	#3 HARROW BAR (FA-500-5)
3	FA-653	#3 HARROW BAR (FA-600-5)
3	FA-753	#3 HARROW BAR (FA-700-5)
3	FA-853	#3 HARROW BAR (FA-800-5)
3	FA-953	#3 HARROW BAR (FA-900-5)
4	FA-556	#4 HARROW BAR (FA-500-5)
4	FA-656	#4 HARROW BAR (FA-600-5)
4	FA-756	#4 HARROW BAR (FA-700-5)
4	FA-856	#4 HARROW BAR (FA-800-5)

4	FA-956	#4 HARROW BAR (FA-900-5)
5	FA-557	#5 HARROW BAR (FA-500-5)
5	FA-657	#5 HARROW BAR (FA-600-5)
5	FA-757	#5 HARROW BAR (FA-700-5)
5	FA-857	#5 HARROW BAR (FA-800-5)
5	FA-957	#5 HARROW BAR (FA-900-5)
6	BHP-6340	5/8 – 11 X 4 HEX BOLT, PLAIN
7	NLT-6311	NUT, TOP LOCK, 5/8”
8	BV-3812	V-BOLT, 3/8”
9	NLT-3816	NUT, TOP LOCK, 3/8”
10	FA-4103	V BOLT PLATE
11	FA-4110	3/4” X 10” TOOTH
12	CT-105	CONNECTOR LINK
13	CT-102	INNER BUSHING
14	CT-107	OUTER BUSHING
15	FA-4105	PULL HOOK

03/13/13

SPR-1000 SPIRAL REEL STALK CHOPPER
HYDRAULICS DIAGRAM



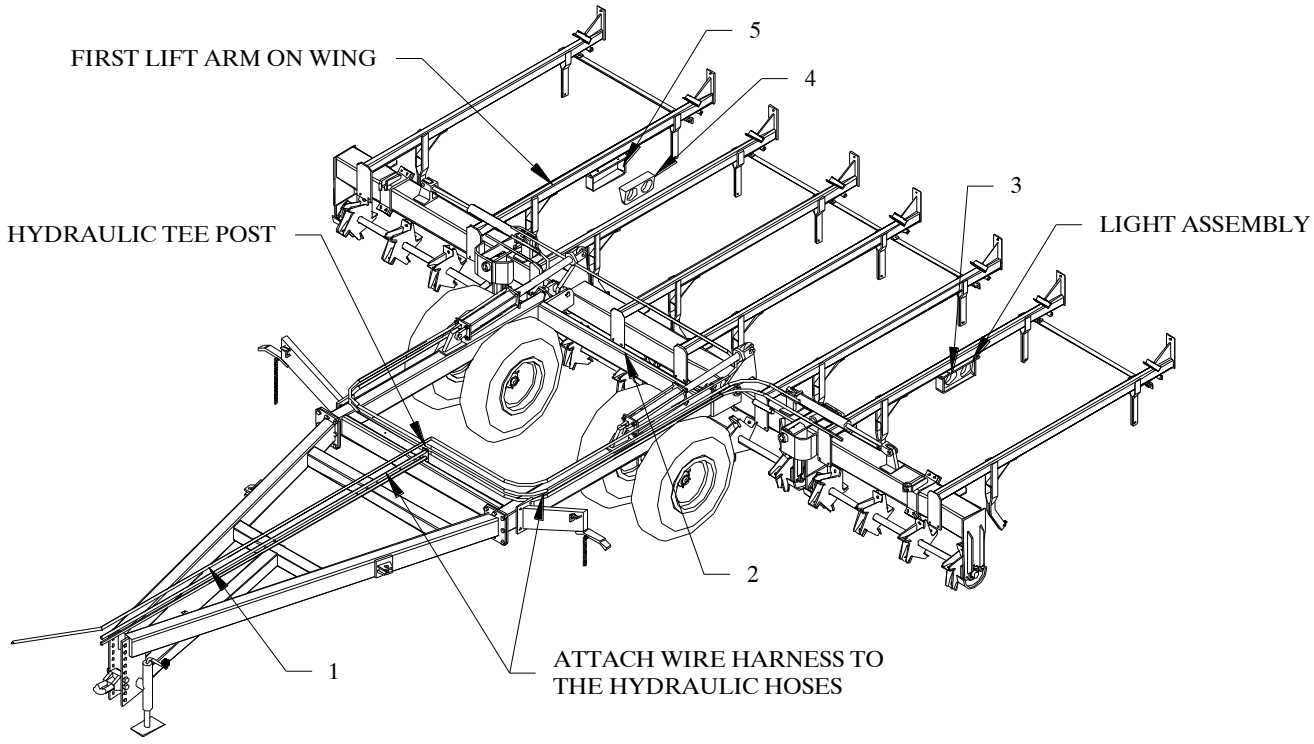
SPR-1020 THROUGH 1030 SPIRAL REEL STALK CHOPPER
HYDRAULICS PARTS LIST

KEY	PART #	DESCRIPTION	QTY.
1	HYO-2103	1" x 3 1/2" CLEVIS PIN	2
2	HYC-32014	2" x 14" HYDRAULIC CYLINDER (1020 & 1020 models)	2
**	HYC-33014	3" x 14" HYDRAULIC CYLINDER (1030 through 1040 models)	2
3	HY-0003	1” x 4 3/4” CLEVIS PIN W/WASHER	2
4	HYO-2123	1 1/4" x 3 1/2" CLEVIS PIN	4
5	HYF-2820	ELBOW (3/8"m – 1/2"o)	4
6	HYF-2821	ELBOW W/RESTRICTOR (3/8"m – 1/2"o)	4
7	HYA-33516	ASAE 3 1/2" x 16" HYDRAULIC CYLINDER	2
**	HYA-34016	ASAE 4" x 16" HYDRAULIC CYLINDER	2
8	HYH-8132	3/8" x 132" HYDRAULIC HOSE (1020 through 1030 models)	2
**	HYH-8158	3/8" x 158" HYDRAULIC HOSE (1036 and 1040 models)	2
9	HYH-8150	3/8" x 150" HYDRAULIC HOSE (1020 through 1030 models)	2
**	HYH-8168	3/8" x 168" HYDRAULIC HOSE (1036 and 1040 models)	2
10	HYH-8072	3/8" x 72" HYDRAULIC HOSE (1020 through 1030 models)	2
**	HYH-8100	3/8" x 100" HYDRAULIC HOSE (1036 and 1040 models)	2
11	HYH-8096	3/8" x 96" HYDRAULIC HOSE (1020 through 1030 models)	2
**	HYH-8126	3/8" x 126" HYDRAULIC HOSE (1036 and 1040 models)	2
12	HYF-1888	TEE (3/8"m – 3/8"m - 3/8"m)	4
13	HYH-9168	3/8" x 168" (with one ½” end) HYDRAULIC HOSE	4

Note: When ordering cylinder replacement parts, please specify cylinder make & part number.

McFarlane Manufacturing reserves the right to change specifications of design at any time without obligation to modify previous products.

SPR-1000 LIGHT KIT
PARTS DIAGRAM

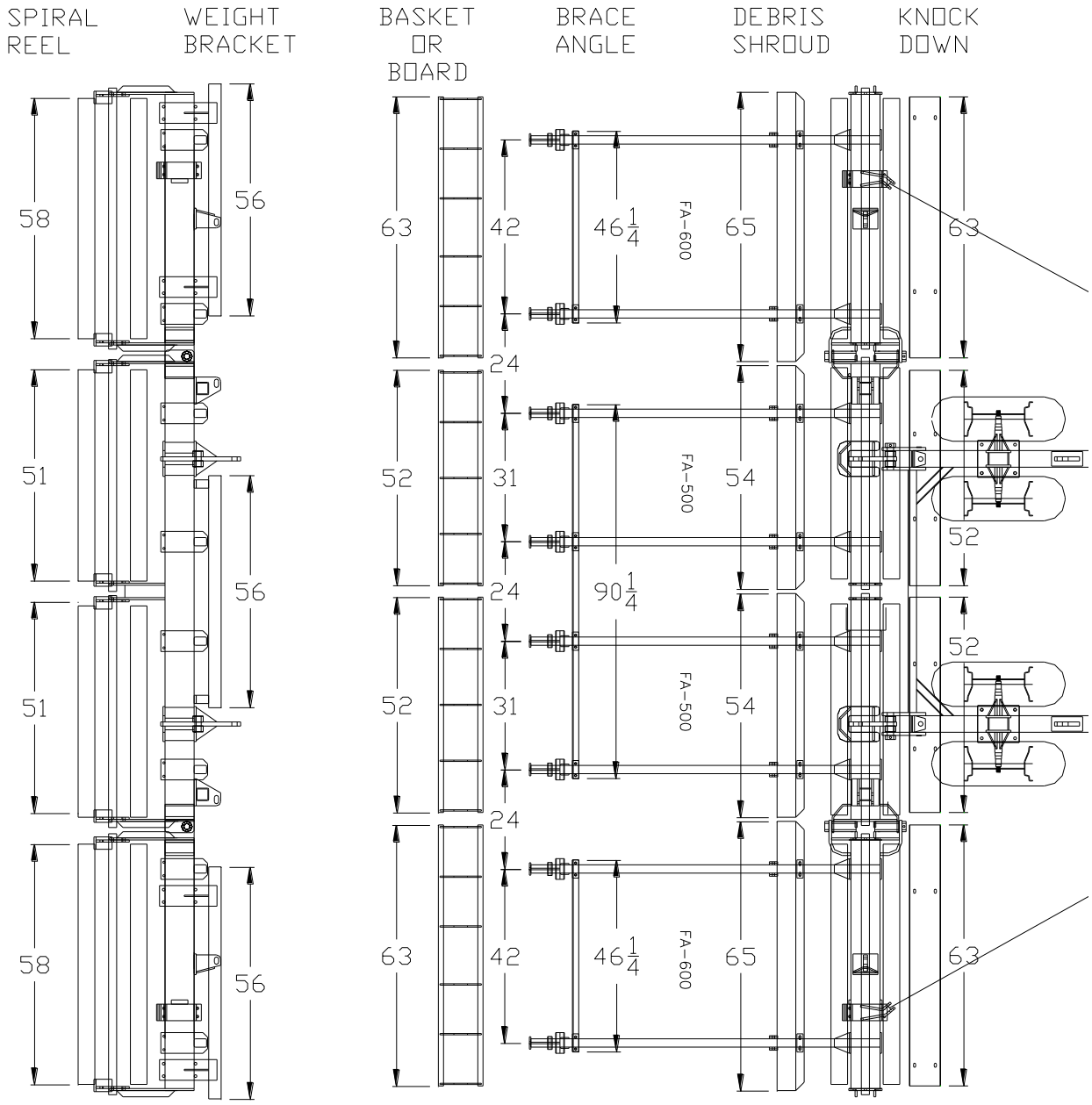


KEY	PART #	DESCRIPTION	QTY.
1		25’ WIRE HARNESS EXTENSION	1
2	LB-1425	25’ WIRE HARENESS WISHBONE	1
3	LB-1101	LIGHT – LEFT HAND	1
4	LB-1102	LIGHT – RIGHT HAND	1
5	LB-1200	LIGHT BRACKET MOUNT	2

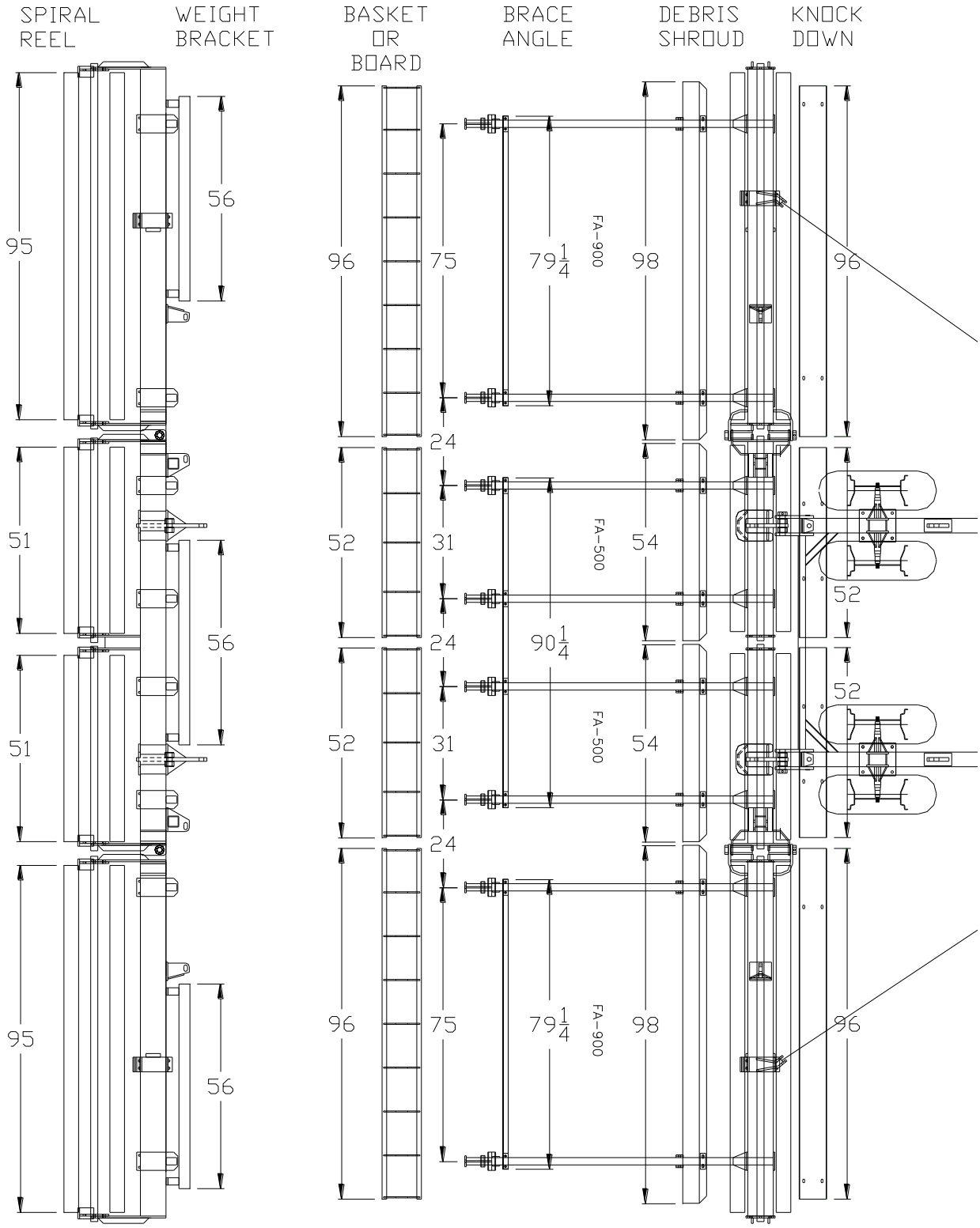
Note: When ordering cylinder replacement parts, please specify cylinder make & part number.

McFarlane Manufacturing reserves the right to change specifications of design at any time without obligation to modify previous products.

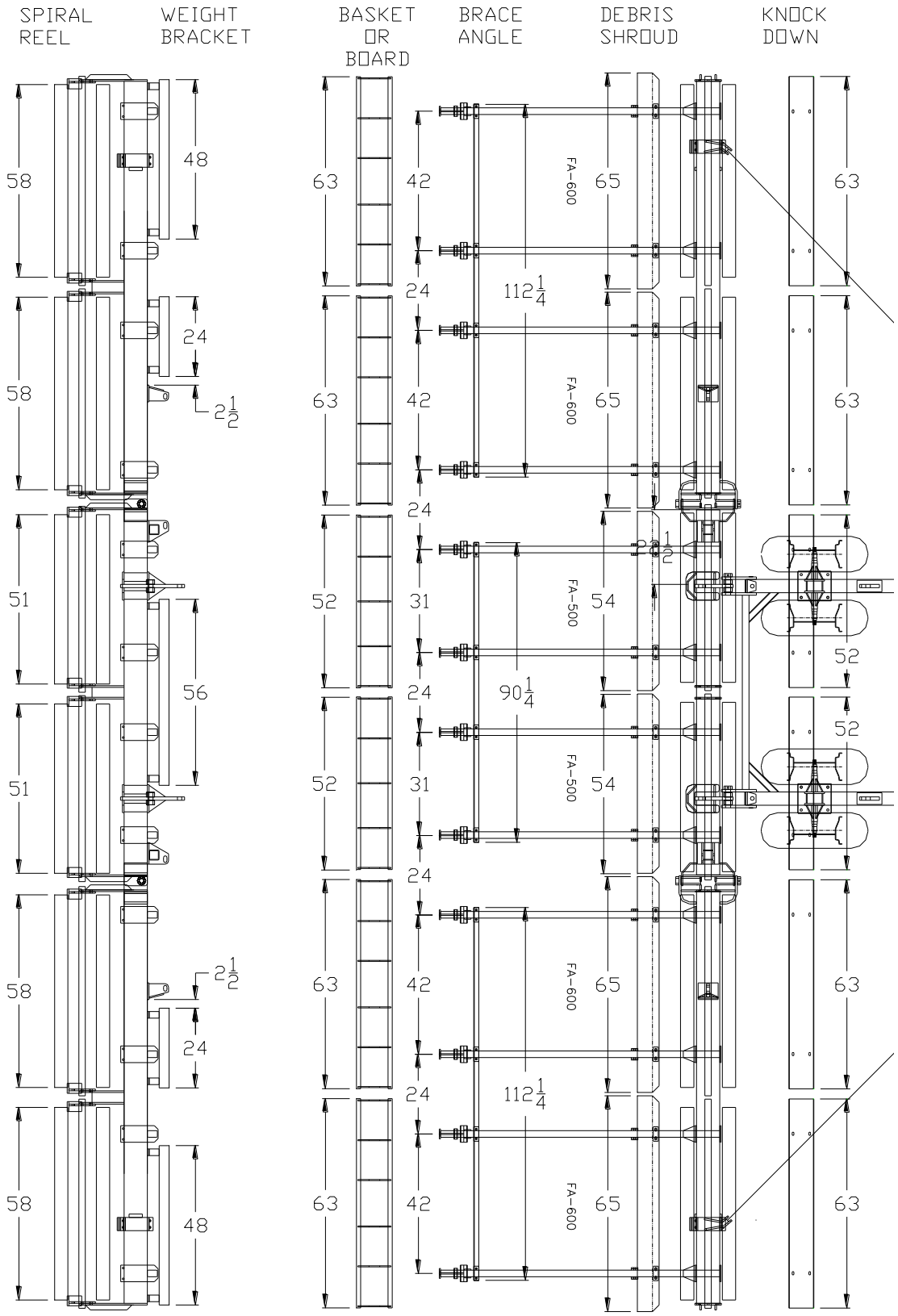
SPR-1020
LAYOUT DIAGRAM



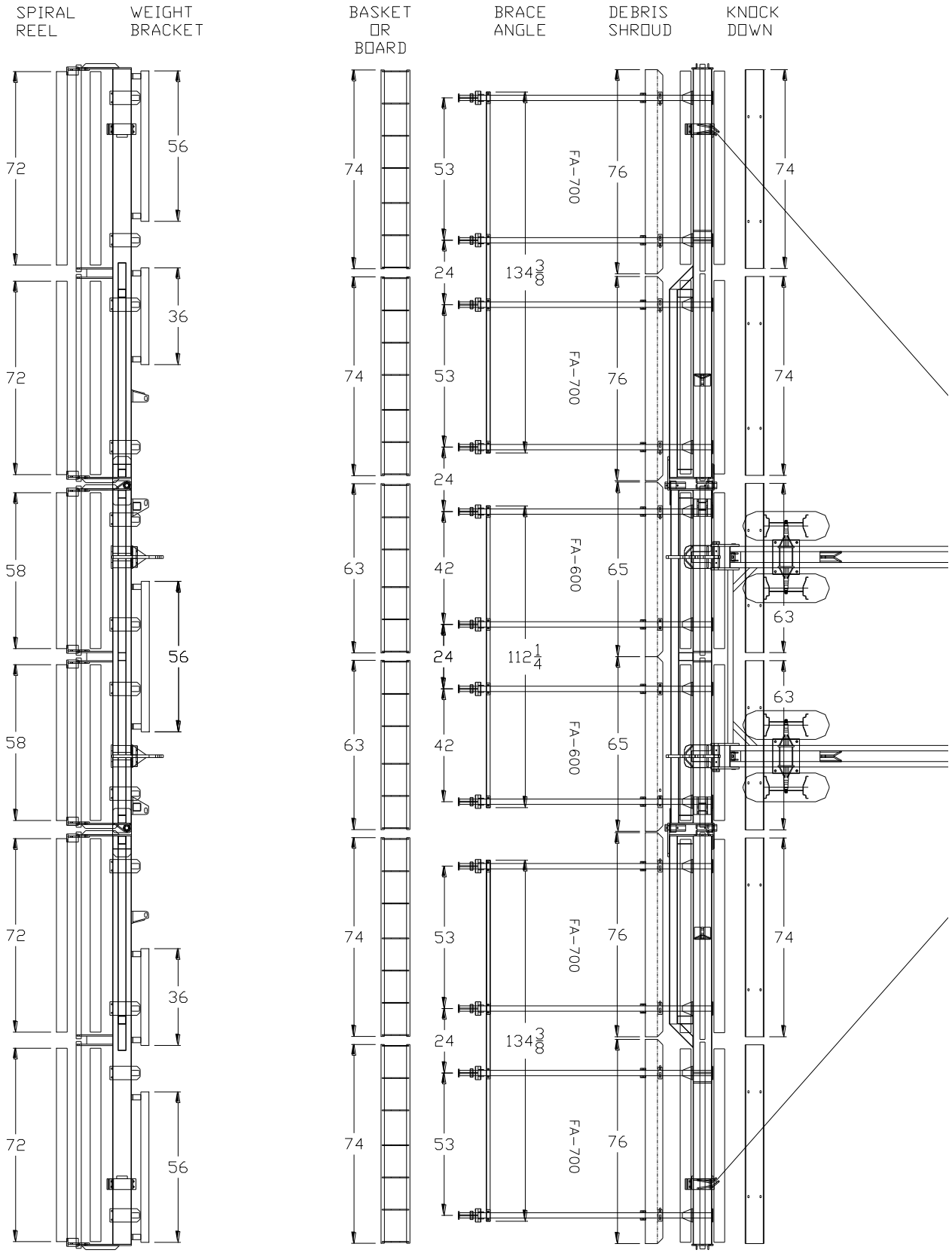
SPR-1026
LAYOUT DIAGRAM



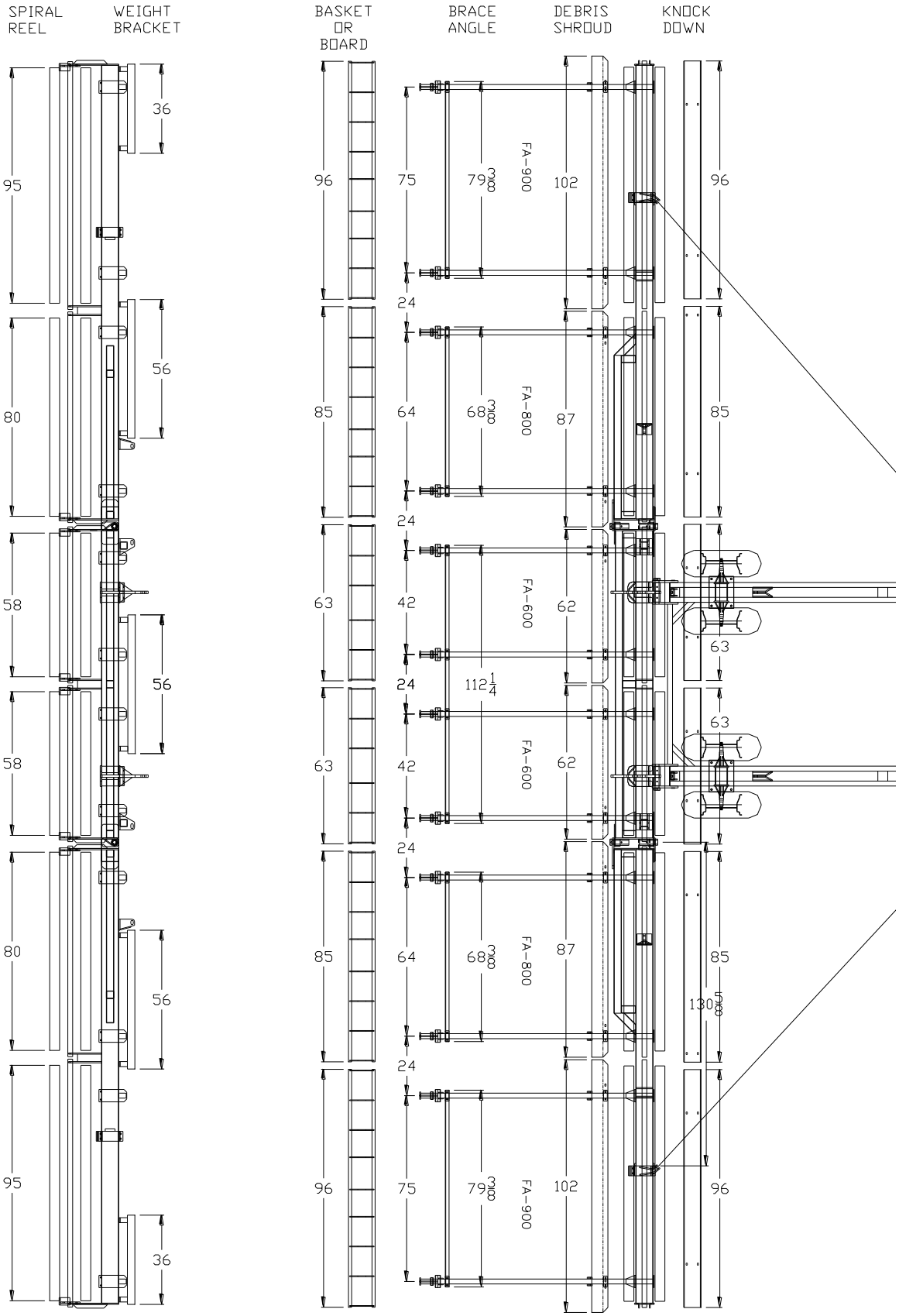
SPR-1030
LAYOUT DIAGRAM



SPR-1036
LAYOUT DIAGRAM



SPR-1040
LAYOUT DIAGRAM



This form must be filled out by the dealer and owner and sent to: McFarlane Mfg. Co., Inc., 1259 South Water Street, P.O. Box 100, Sauk City, WI 53583.

WARRANTY REGISTRATION FORM & INSPECTION REPORT

WARRANTY REGISTRATION

This form must be filled out by the dealer and signed by both the dealer and customer at the time of delivery.

Customer Name_____ Dealer Name_____

Address_____Address_____

City, state, code_____ City, state, code_____

Phone number (____)_____

Model _____Serial Number _____Delivery Date_____

DEALER INSPECTION REPORT

_____Wheel bolts tight
_____Fasteners tight
_____Hydraulic hoses free
_____Hydraulic fittings tight
_____Arms free
_____Check tire pressures
_____Lubricate machine

SAFETY

_____All decals installed
_____Review operating and safety instructions

I have thoroughly instructed the buyer on the above described equipment; review included the operator's manual content, equipment care, adjustments, safe operation and applicable warranty policy.

Date _____Dealer's signature_____

The above equipment and operator's manual have been received by me and I have been thoroughly instructed as to care, adjustments, safe operation, and applicable warranty policy.

Date _____Owner's signature_____

Dealer Contact Information

McFARLANE MANUFACTURING CO. INC.
1330 DALLAS STREET, P.O. BOX 100
SAUK CITY, WISCONSIN 53583
PHONE: (608) 643-3321
TOLL FREE: (800) 627-8569
FAX: (608) 643-3976
WEB: www.flexharrow.com