OPERATOR'S MANUAL
AND
PARTS LISTING
FOR THE

C3-7000 Series
Seedbed Management

version: 2-24 (17043)
starting at serial number 24239

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 · PO Box 100 · Sauk City WI 53583
Phone (608) 643-3322 · Toll Free (888) 627-8569 · Fax (608) 643-3976
mcfarlanemfg.com

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INTRODUCTION

Thank you for purchasing your new McFarlane C3 Seedbed Management tool. 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 many uses for the McFarlane C3, including incorporation of herbicides and pesticides, leveling and smoothing tilled soil, covering of broadcast seeds and cover crop crimping. Contact your dealer if you would like more information or have questions concerning these or other applications.

LIMITED WARRANTY

FULL ONE - YEAR WARRANTY OF

C3-7000 Series
all Models

If within one year from the date of purchase, this unit and/or its accompanying harrow sections, rolling baskets, or Dura-Reels should 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

Product Registration:

All McFarlane Ag products need to be registered to the owner prior to use.

The dealer is required to submit the product registration through the McFarlane dealer portal.

Failure to register the product may result in future warranty claims being rejected.

Register at www.mcfarlaneag.com/product-registration

Scan to Register

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.
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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 this unit and its accompanying harrow sections, rolling baskets, or Dura-Reels. 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.

 **During Operation:**

- 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.

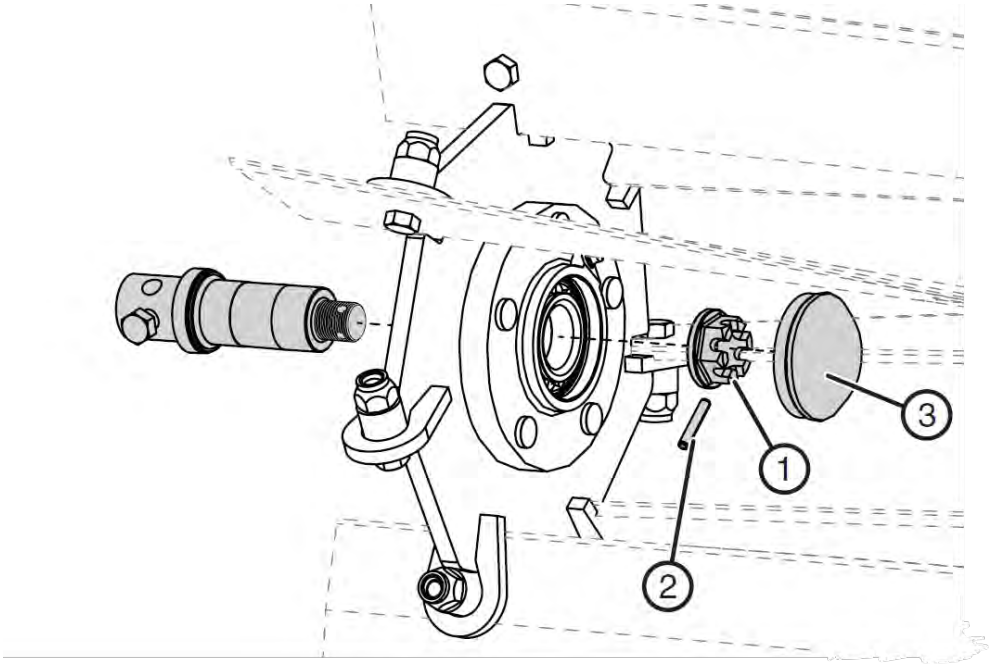
 **Performing Maintenance:**

- 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.
- Inspect and repack wheel bearings at the beginning of each year.
- Remove dirt and debris from the harrow sections before storage.
- Lubricate Dura-Reel hubs annually.
- Parts diagrams and listings for service and repair references may be found in appendix B.

Assembly and Lubrication of Dura-Reel Hub



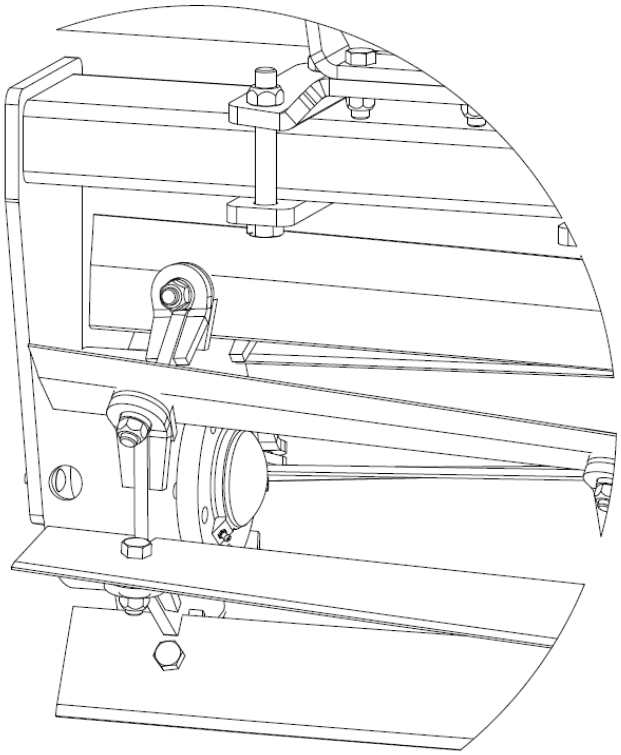
1. Tighten hex slotted nut (1) to 40 ft.-lbs. Loosen nut until first slot in nut aligns with hole in spindle. Rotate hub five revolutions. If rotation is tight, loosen nut an additional slot.
2. Push spring pin (2) through nut and spindle until it is flush with the nut.
3. Apply grease through the zerk until grease emerges through the bearing rollers. Rotate hub five times.
4. Press dust cap onto hub.
5. Check end play.
    a. Hold spindle securely in place.
    b. Place a dial indicator onto the hub to measure upward movement.
    c. Use a bar or lifting device to raise the hub upwards.
    d. The reading should not exceed 0.002” (0.05mm). Repair or replace hubs with excessive play.

Dura Reel Blades

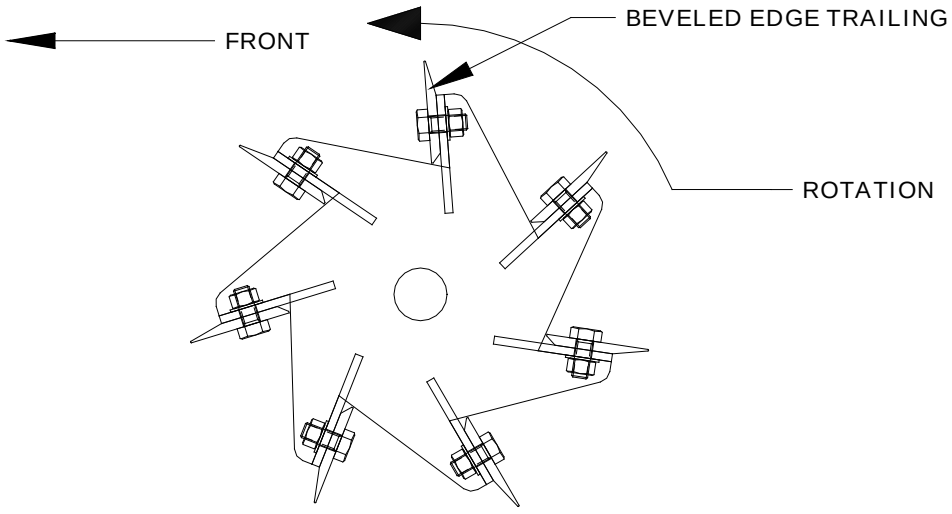
To replace a Dura-Reel blade:

1. Remove the bolts that secure the blade to the center plate,
2. Install a new blade with 5/8-11 x 2-1/4" bolts and lock nuts. Tighten the nut to 160ft.lbs. (215 N•m).

Note: Make sure the blades are positioned with the beveled edge of the blade closest to the tab on the center plate, as shown in the drawing. Install the Bolts from the blade side.



Note the blade orientation.



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 (7 - 10) 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 rolling basket height includes the following steps:
  1. Loosen the jam nut on the rolling basket spring bolt.
  2. Turn the adjusting bolt to either raise or lower the rolling basket. Make sure all rolling baskets are at the same height. Failure to do so will result in an uneven seedbed.
  3. Note: the rolling basket spring tension is set at the factory and should not be adjusted.
  4. Tighten the jam nut and continue to run. During operation, the spring should only lightly compress. Too much spring tension will cause premature failure, especially when going through waterways or ditches.
- Adjusting the pull point height includes the following steps:
  5. Remove the bolts that hold the pull point to the lift arm.
  6. Adjust the pull point up or down, ensuring it does not contact the ground during operation.
  7. Replace the attaching bolts.

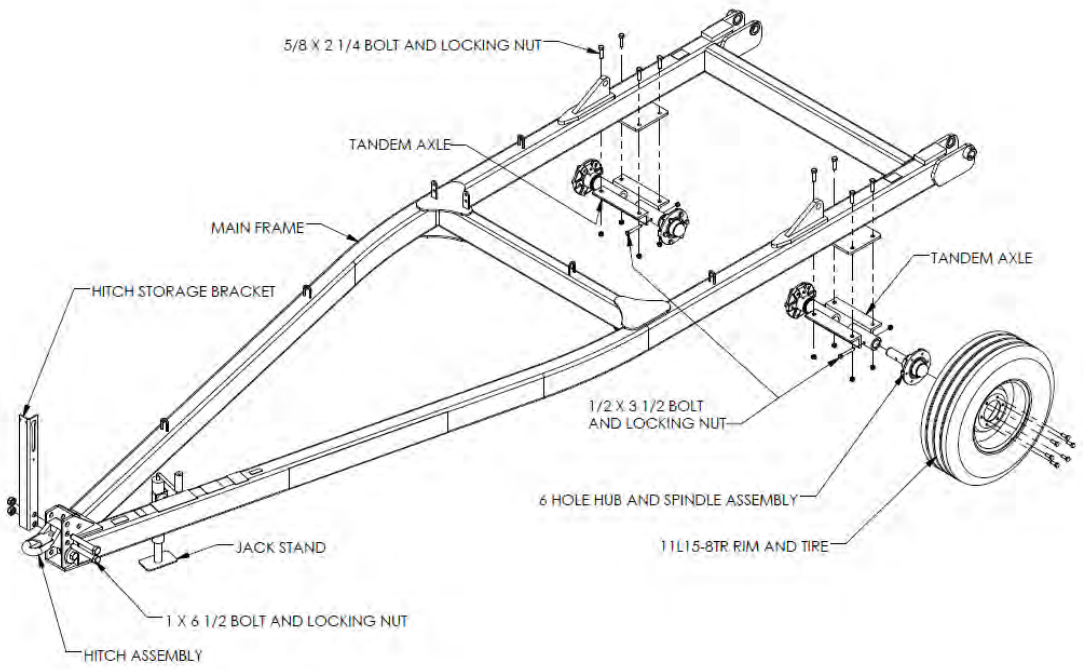
ASSEMBLY SUGGESTIONS

- 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 is being set up. 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.

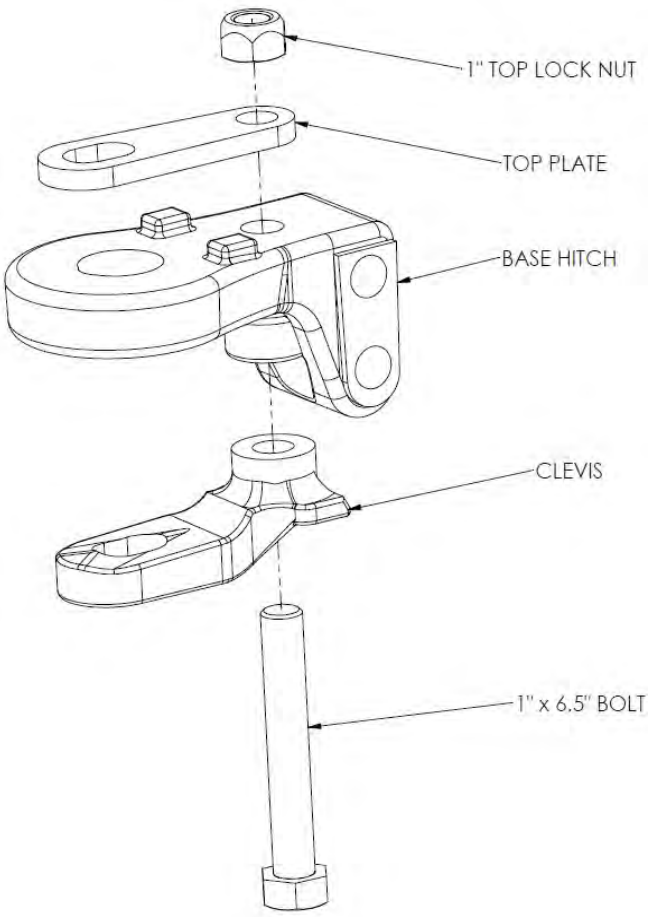
STEP-BY-STEP ASSEMBLY INSTRUCTIONS

Main Frame Assembly

1. Bolt the Axle Brackets to the main frame. Use 5/8” x 2 1/4” bolts and locking nuts.
2. Attach the hub with spindle to the Axle Bracket using 1/2” x 3 1/2” grade 8 bolts and lock nuts.
3. Mount the wheels to the main frame Axle Brackets. Be sure the valve stem is pointing away from the Axle Bracket.
4. Attach the jack to the Main Frame.

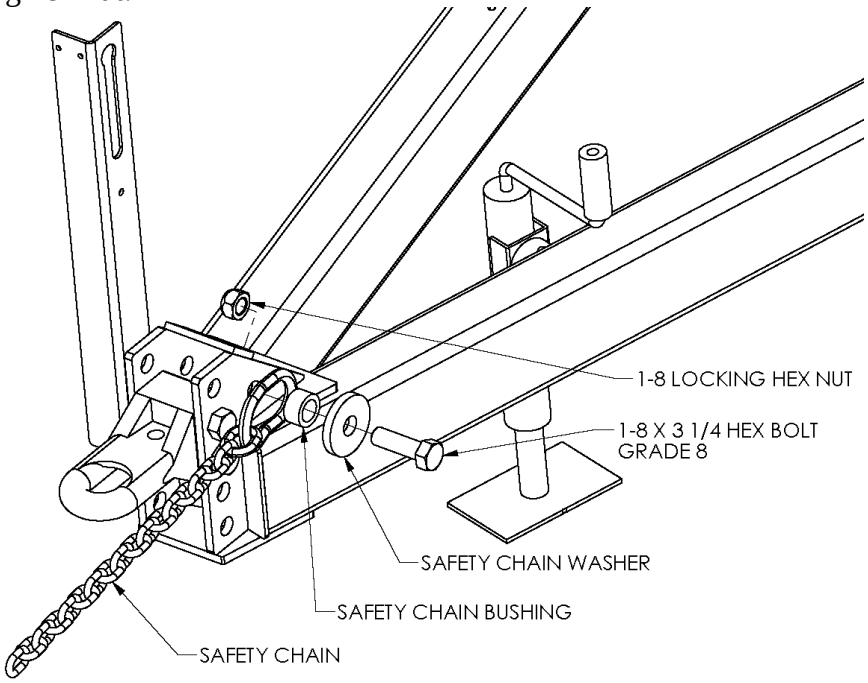


5. Assemble pintle hitch (Figure 2). Note the opposite orientation of the base hitch. Attach the hitch assembly to the A-frame with two 1” x 6 1/2” bolts and locking nuts. Be sure to include the hitch storage bracket as shown.



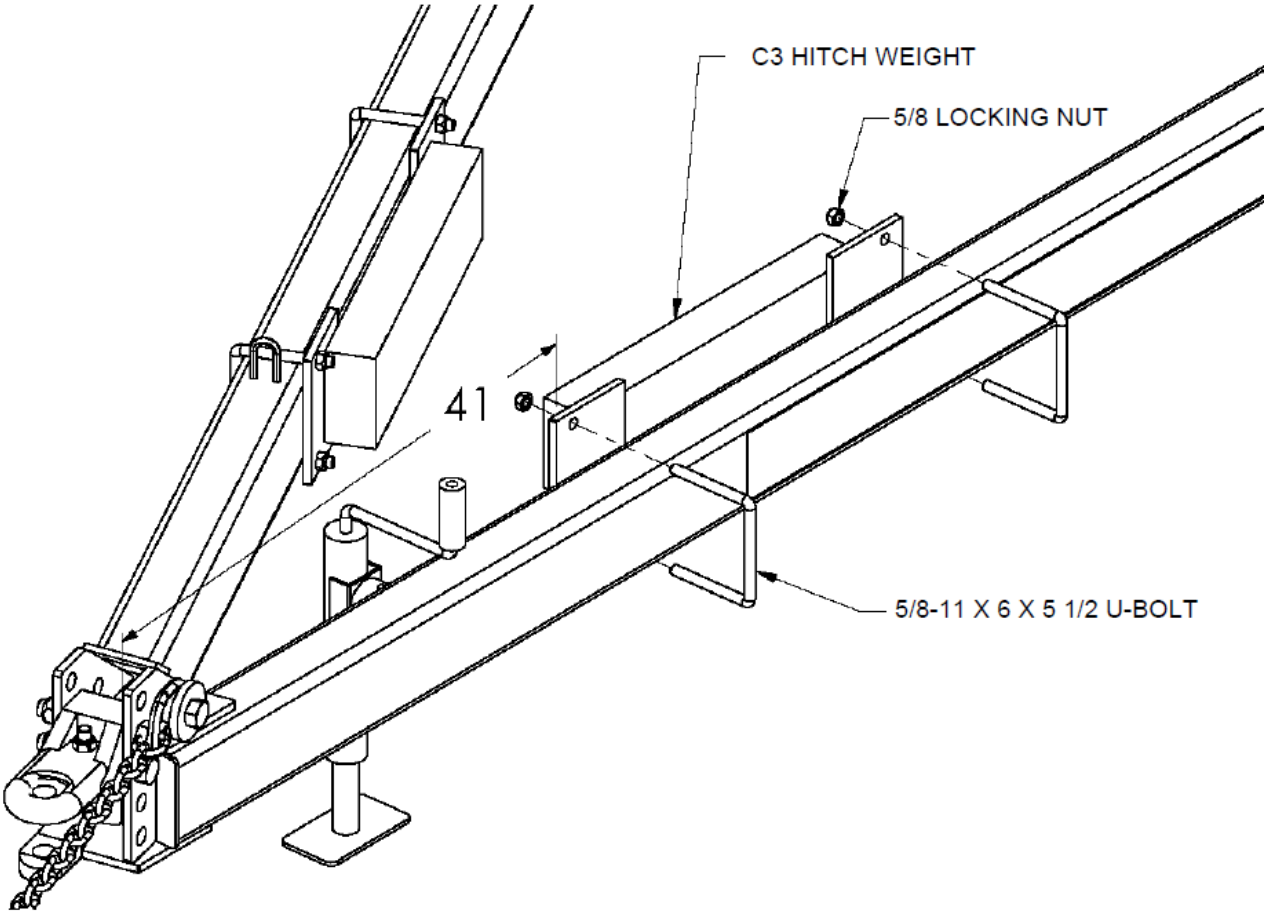
Attach the Safety Chain

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



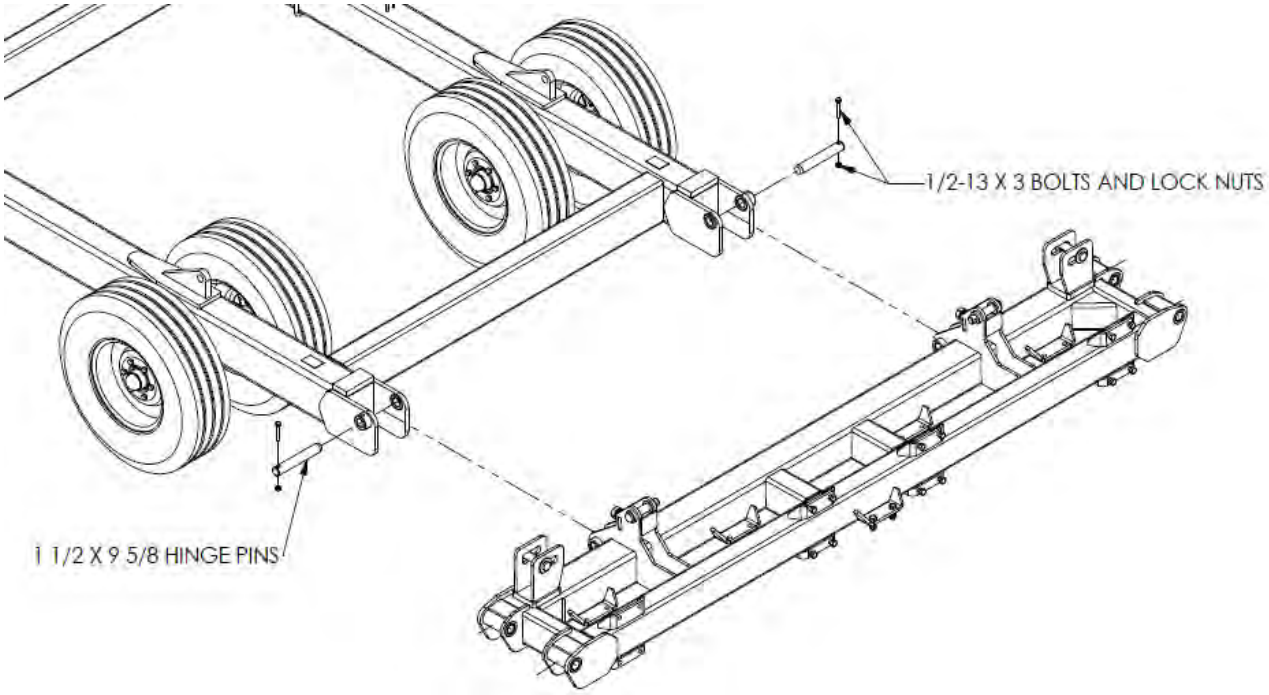
Attach the Hitch Weights to the Main Frame
(7020 model only)

Attach the Hitch Weights (16818) to the Main Frame as shown in Figure 4. Dimension from front of side tube to front of weight mount plate should be approximately 41. The weights must be far enough back so that the jack can turn 90 degrees and pin into the field position.



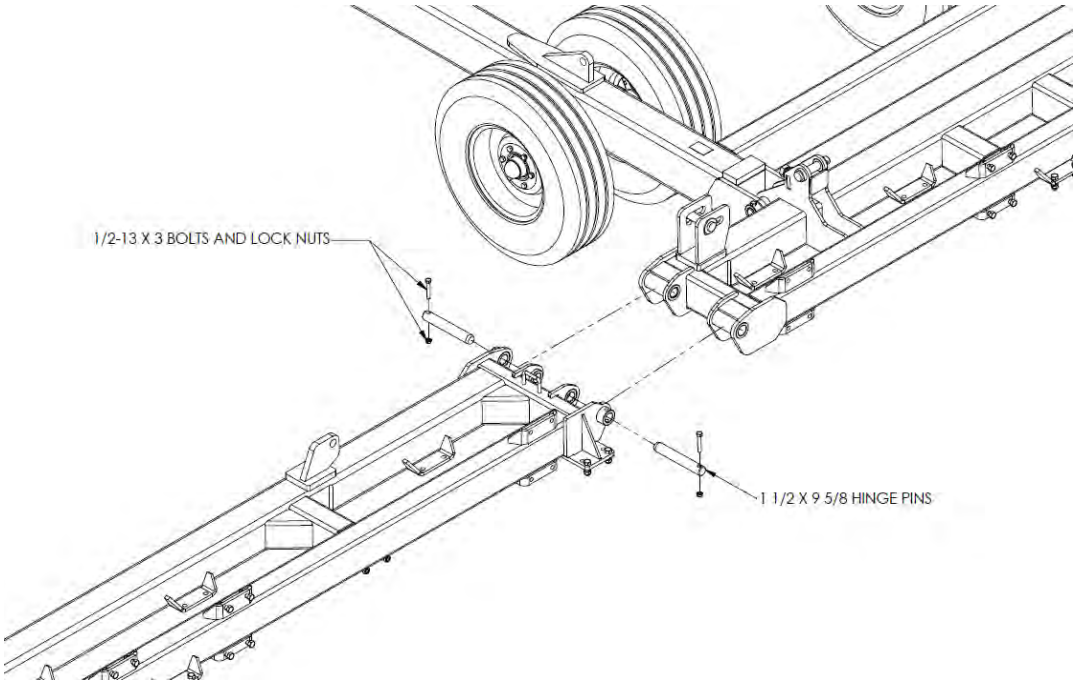
Attach the Center Bar

1. Attach the Center Bar to the Main Frame assembly. Use the 1 1/2” x 7 5/8” (SPR-2712) (models 7020 and 7030) or 1 1/2” x 9 5/8” (RT-2107) (model 7040) center bar hinge pins and the 1/2” x 3” grade 8 bolts and locking hex nuts.



Attach the Wings

2. Attach the wing to the center bar using the 1 1/2” x 9 5/8” (RT-2107) wing hinge pins and the 1/2” x 3” grade 8 bolts and locking hex nuts.

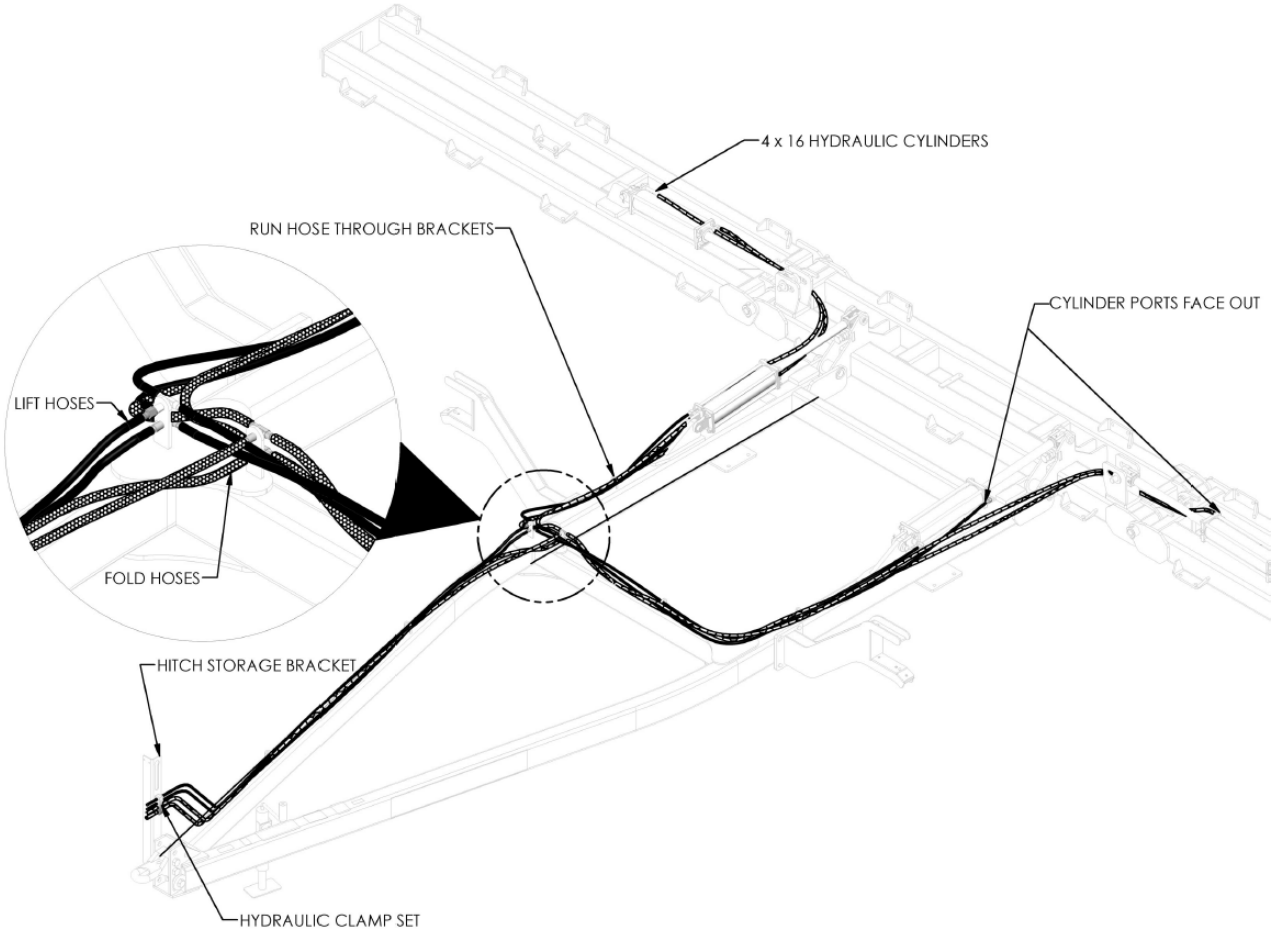


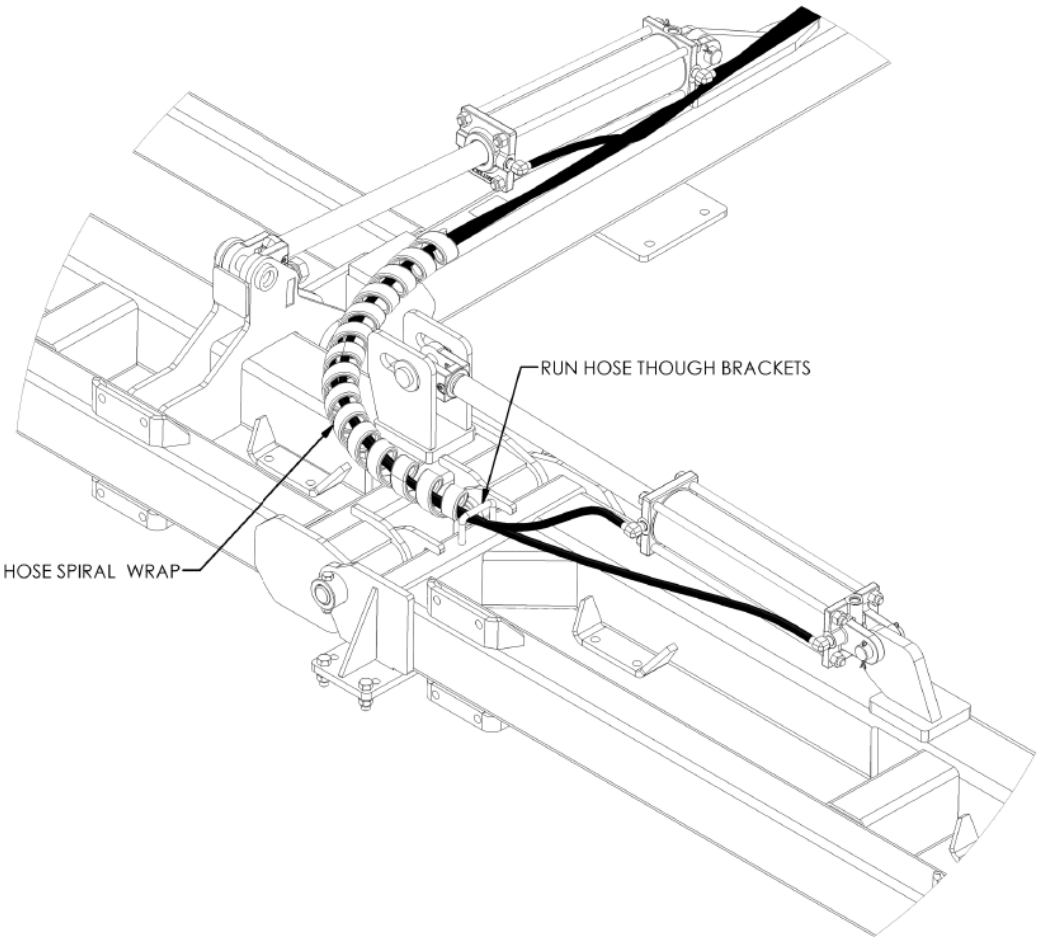
Install the Main Frame Hydraulics

See the Hydraulic System Schematic in Appendix B for more details.

1. Attach the 4" x 16" hydraulic cylinders to the cylinder posts on the main frame and toolbar. Note the ports on the main frame cylinders point toward the outside of unit and the ports of the wing fold cylinders point towards the rear of the unit.
2. Insert 9/16M-3/4-Morb Tees (HYF-2820) into the main frame cylinder ports. Insert 9/16M-3/4Morb Elbow with restrictor (HYF-2821) into the wing fold cylinder ports. Do Not Overtighten.
3. Attach the 9/16M-9/16M-9/16M Elbows (HYF-1888) to the hydraulic tee brackets on the main frame using the tee nut.
4. Attach the 9/16F-9/16M,1/16 Restrictor (11391) to one of the HYF-1888 Tees as shown in the schematic in Appendix B.
5. Connect hoses according to Hydraulic Schematic found in Appendix B and the images below. Note: Make sure the hydraulic hoses that go to the wing cylinders are up on top of the center bar tube and the lift arm. Do not allow them to hang down in front of the center bar where they will come in contact with the Dura-Reel blades. Run the hoses through the hose loops that are on the frame and toolbar. Install the hose spiral wrap over the hoses that run from the main frame to the wing frame prior to connecting to the cylinders.

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.

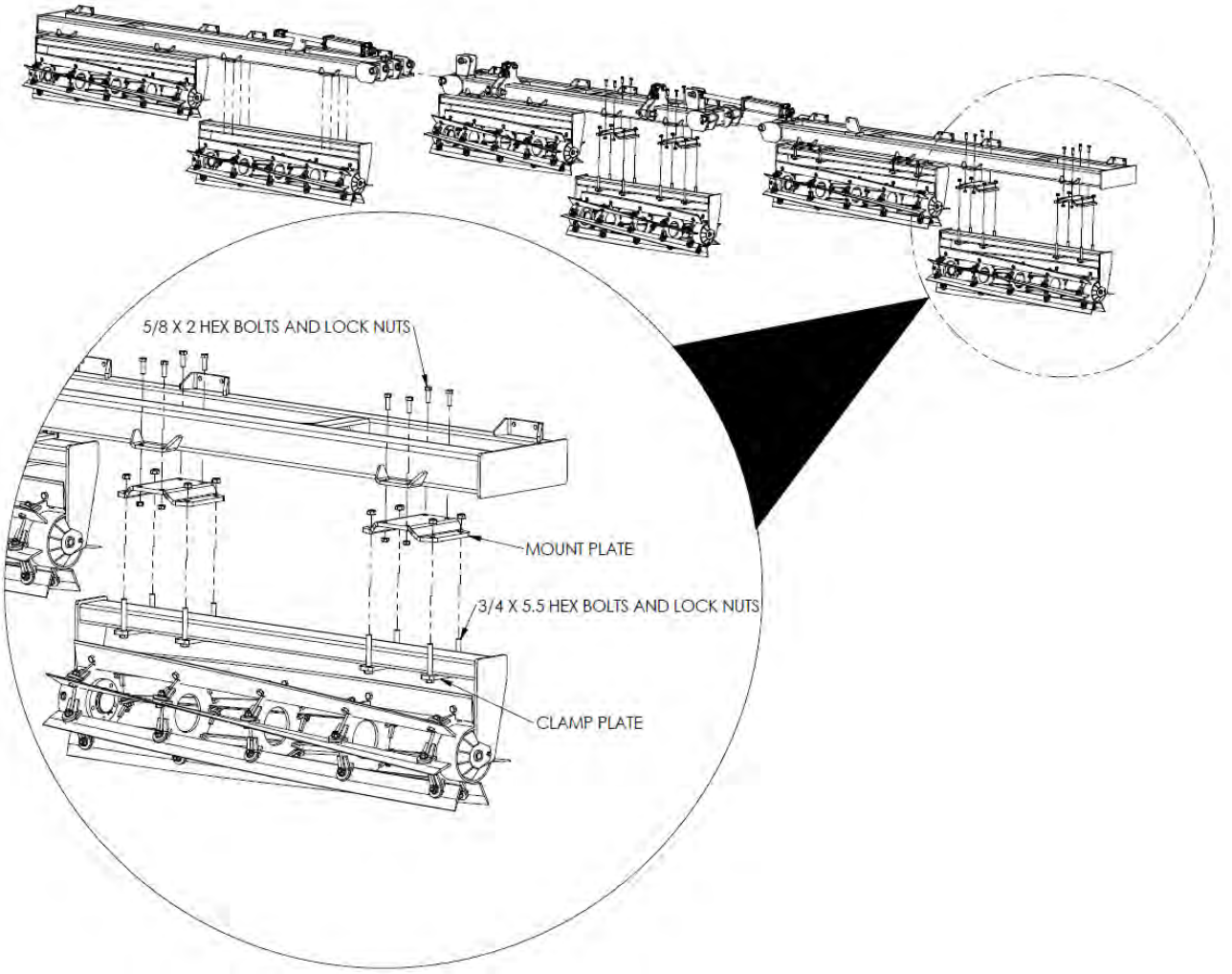


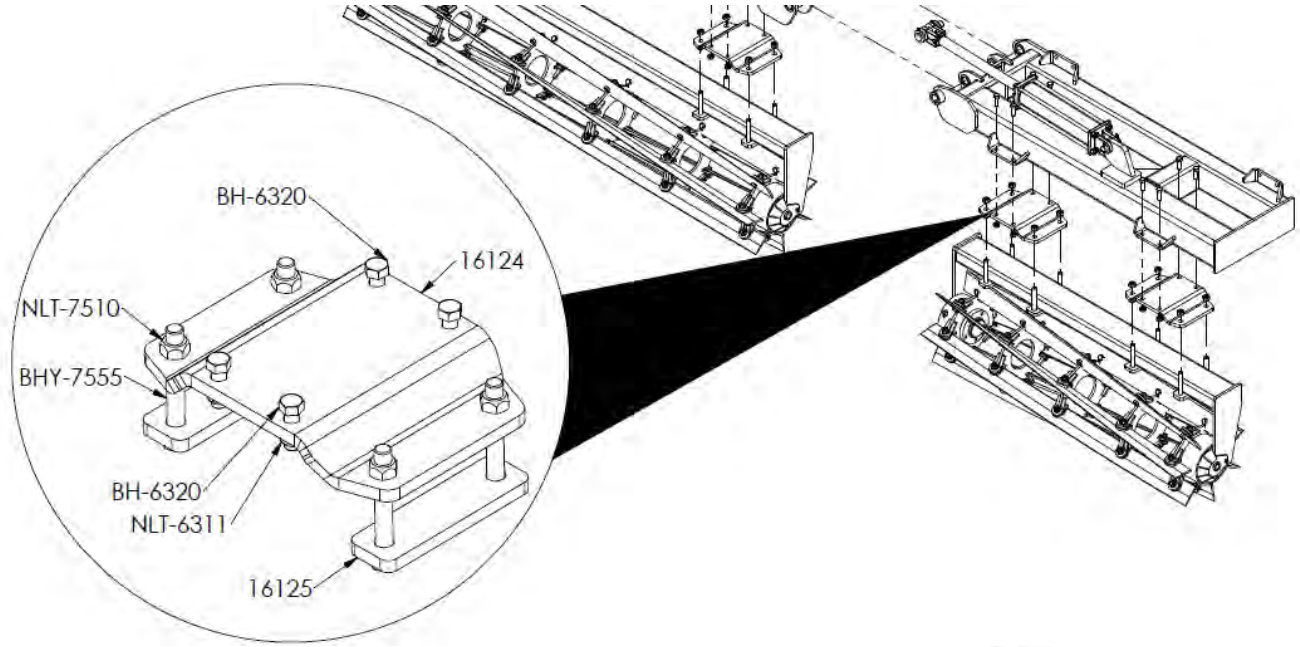


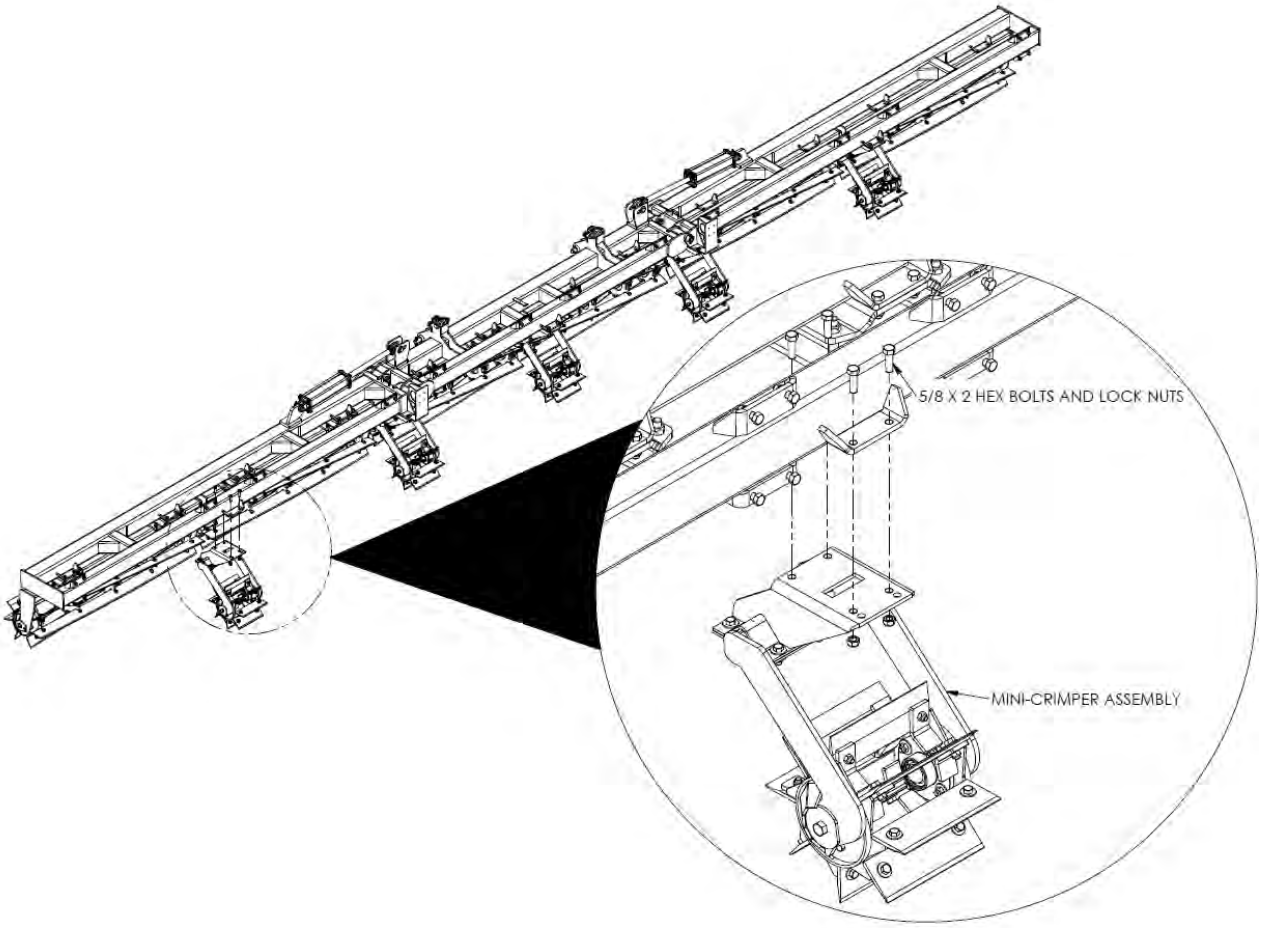
See hydraulic system schematic in Appendix B for more details.

Attach the Dura-Reels

1. Refer to the layout diagrams in appendix C for Rolling Basket placement. Be sure to use the layout with the correct unit. Attach Mount Plate (16124) to frame using 5/8" x 2" hex bolts and lock nuts.
2. Attach the Rolling Baskets to the mount brackets using the Clamp Plates (16125), 3/4" x 5 1/2" hex bolts, and lock nuts.



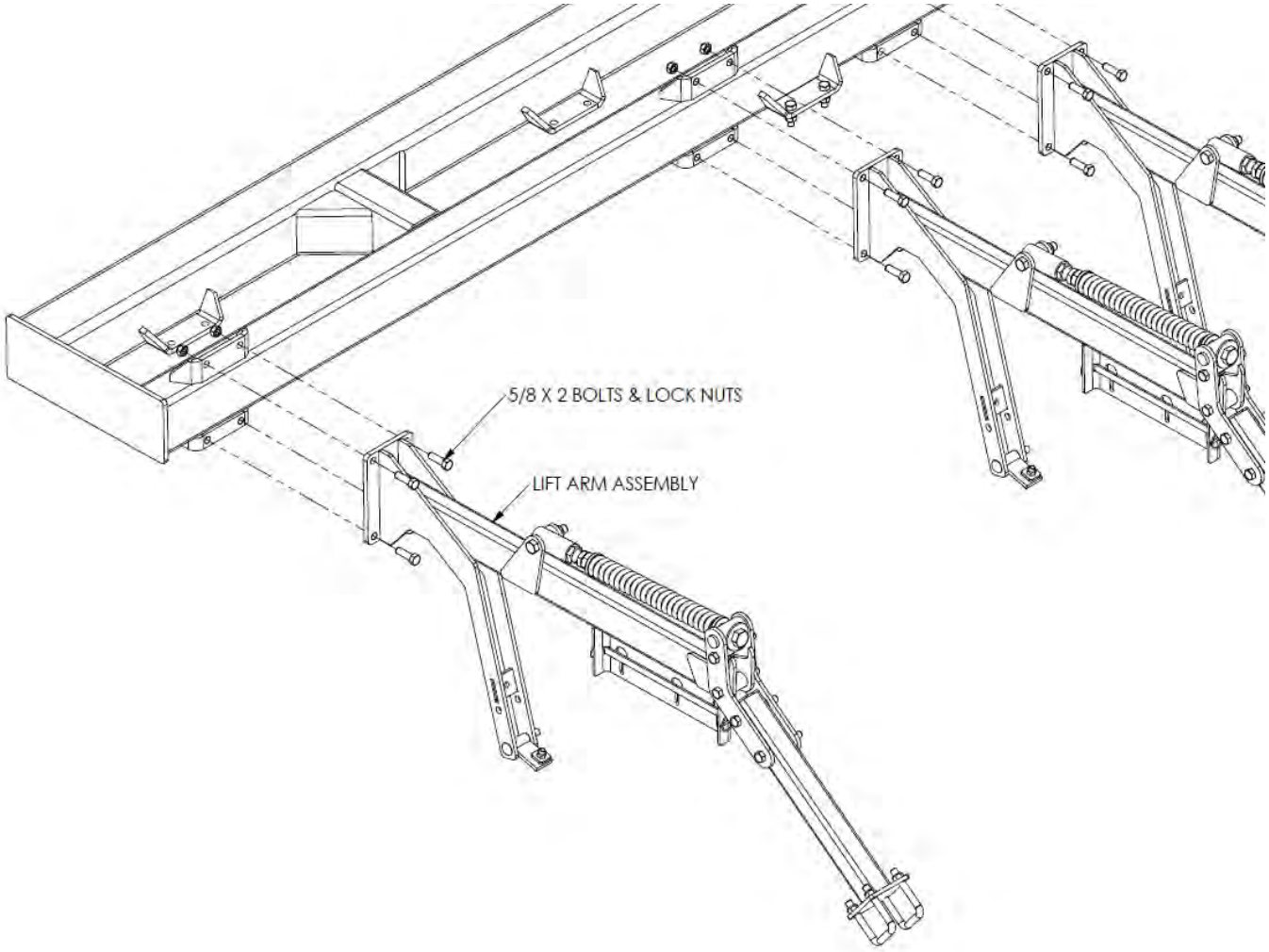




Refer to Layout Drawings in Appendix C for Model-Specific Layouts

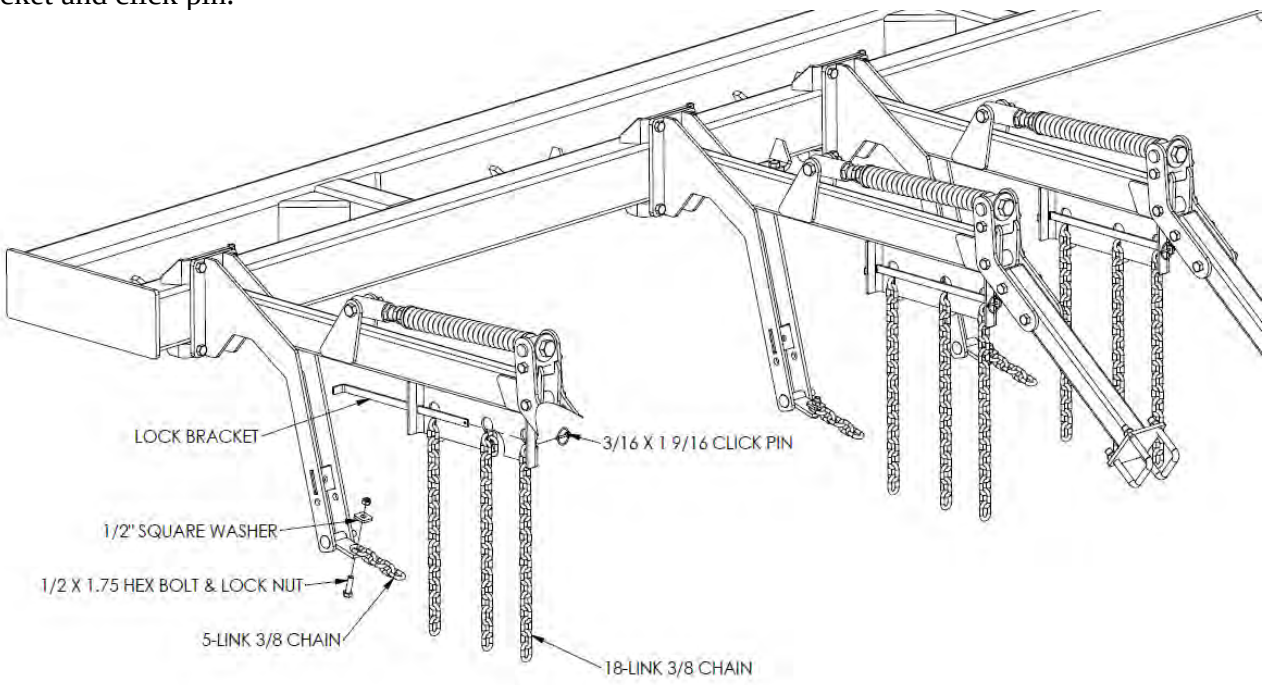
Attach the Lift Arms

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 5/8" x 2" bolts and lock nuts for each lift arm.



Attach the Harrow Sections

1. Bolt a 5-link chain to each of the lift arm pull points using 1/2" x 1 3/4" bolts, square washers, and lock nuts, as shown. Remove clip pin and lock bracket and insert the 18-link chains into the slots. Start with three 3 chain links hanging past the slot and adjust as needed. Make sure chains are not twisted when inserting into the slot. Replace the lock bracket and click pin.

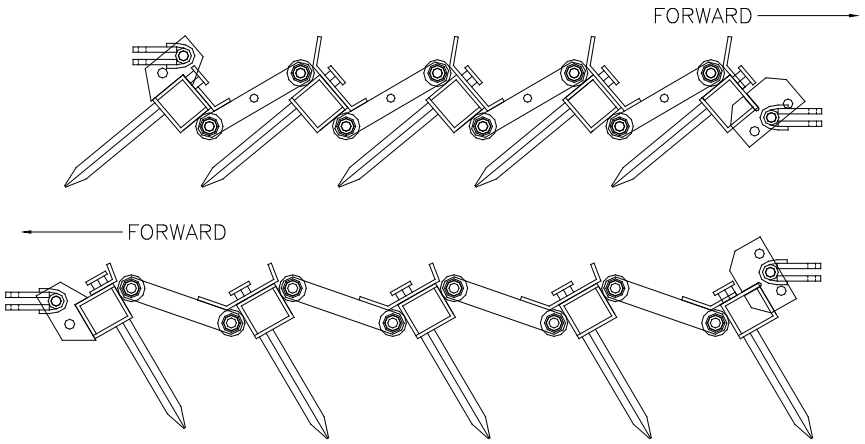


Harrow Identification

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.

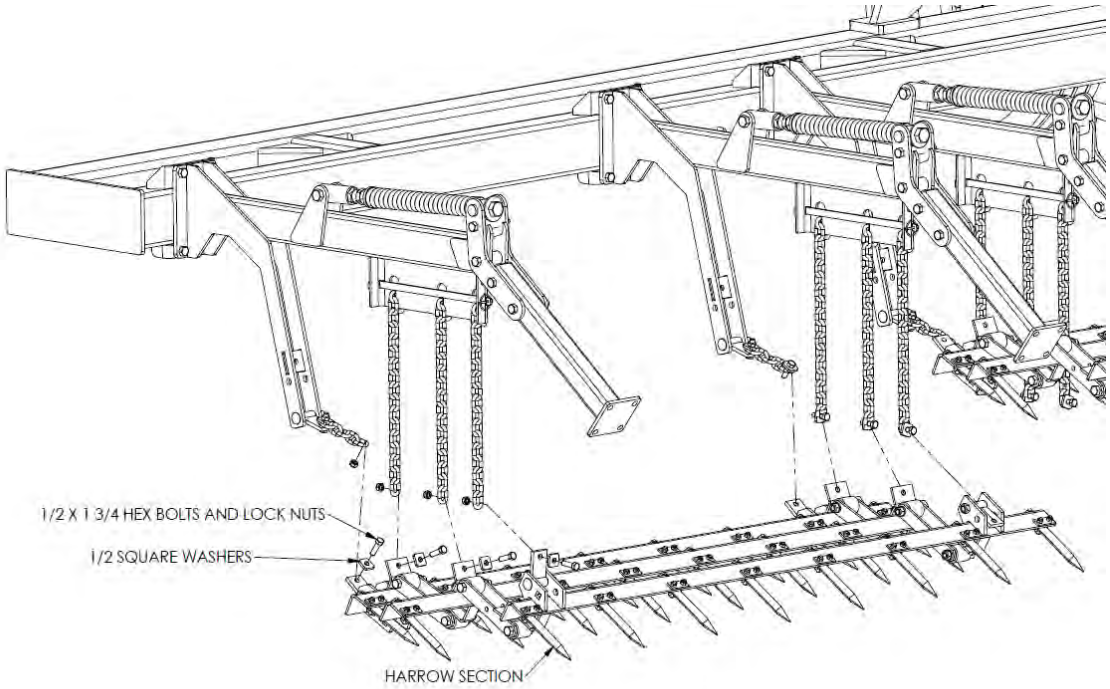
Angle of Attack

Before placing the harrows in 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

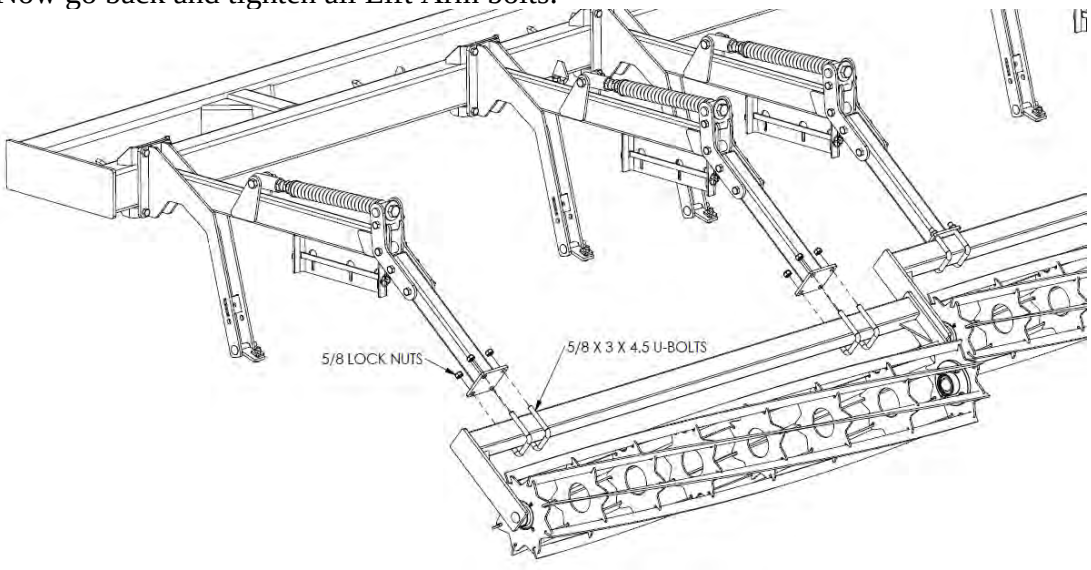
1. Position the harrow sections in their appropriate places. Refer to appendix C for harrow section layout. Be sure to use the correct unit width when determining section layout.
2. Once the harrow sections have been positioned in place, attach the 5-link pull chain and the 18-link lift chains using 1/2" x 1 3/4" bolts, square washers, and lock nuts, as shown.



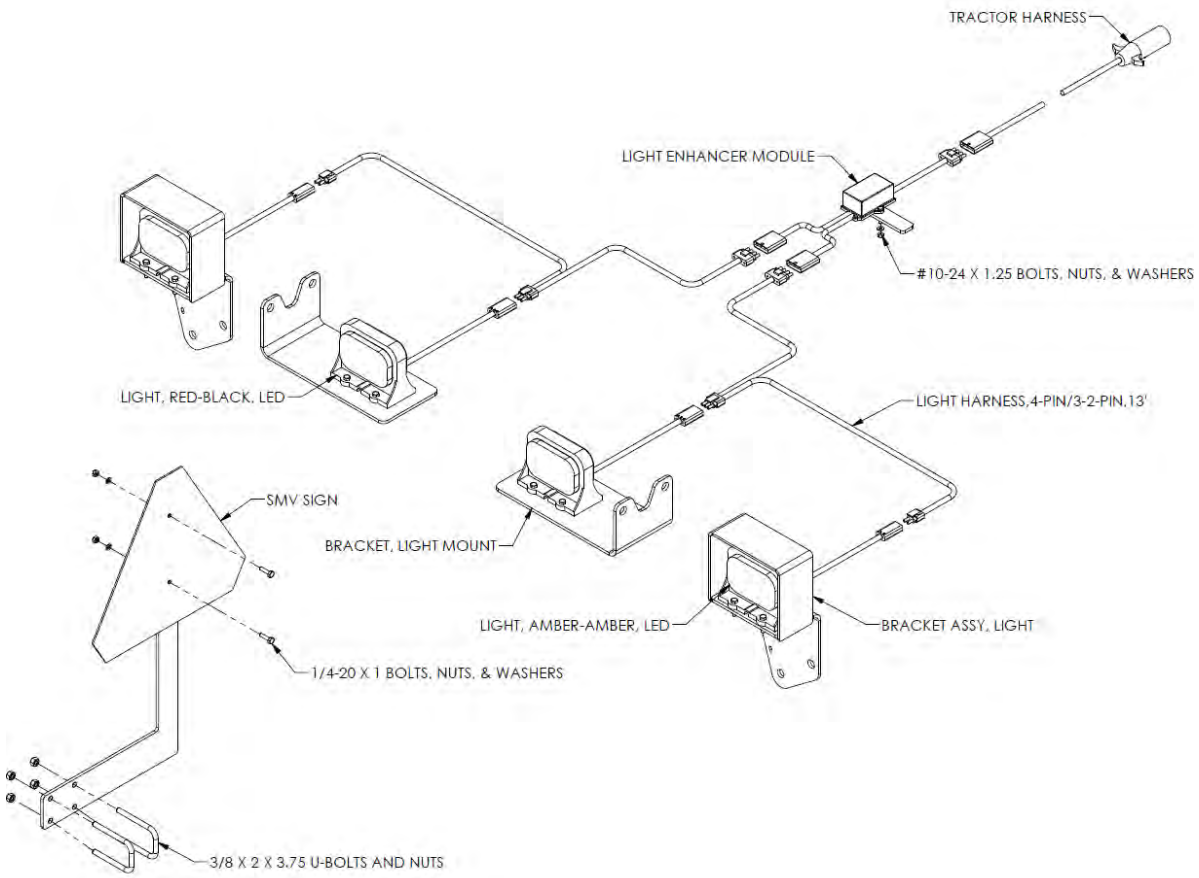
Attach the Rolling Baskets

3. Refer to the layout diagrams in appendix C for Rolling Basket placement. Be sure to use the layout with the correct unit. Attach the Rolling Baskets to the Pivot Arm assemblies using the 5/8" x 3" x 4 1/2" U-bolts and lock nuts.

4. Now go back and tighten all Lift Arm bolts.



Attaching the Lights



1. Attach Light Enhancer Module to Frame Light Mount using the #10 x 1 1/4” bolts, washers, and hex nuts.

2. With the unit in the field position, lay the 4-PIN/3-2-PIN,13’ Light Harness out on the tool bar. Connect to the male ends of the Light Enhancer Module and then bring across to the first lift arm of each wing. Do not attach to the frame yet.

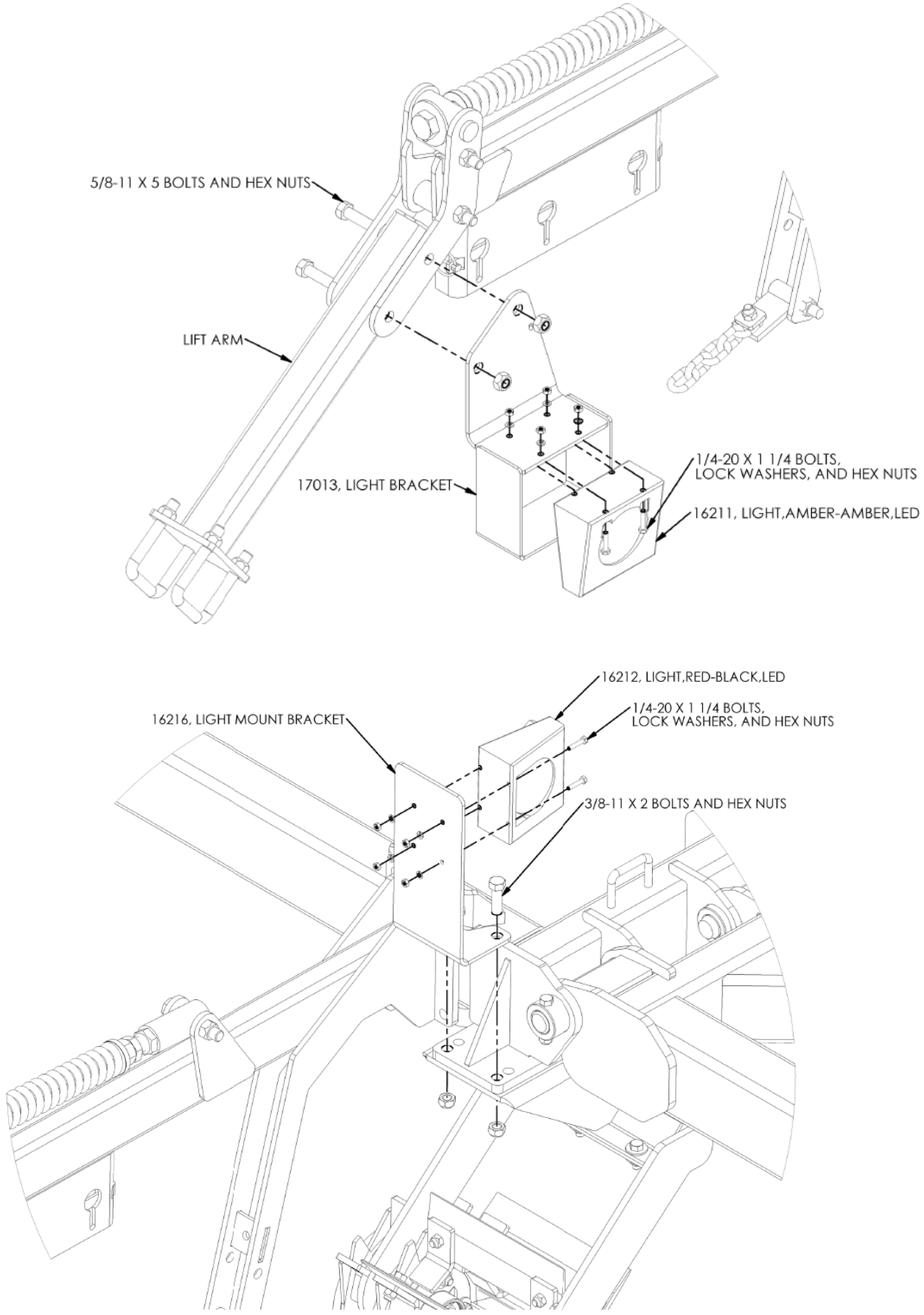
3. Lay out the Tractor Wire Harness with the seven-pin connector. Start by connecting the male end of Light Enhancer Module to the Tractor Wire Harness. Then work towards the hitch, following along the rear cross tube to the hydraulic cylinder and then along the hydraulic hoses. Do not attach to the 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.

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

5. Attach the amber light assemblies to the first lift arm on the wings as shown, using the 3/8 x 5 bolts, lock washers and hex nuts.

6. Attach the red light assemblies to the Gap Reels as shown, using the 3/8 x 2 bolts, lock washers and hex nuts.

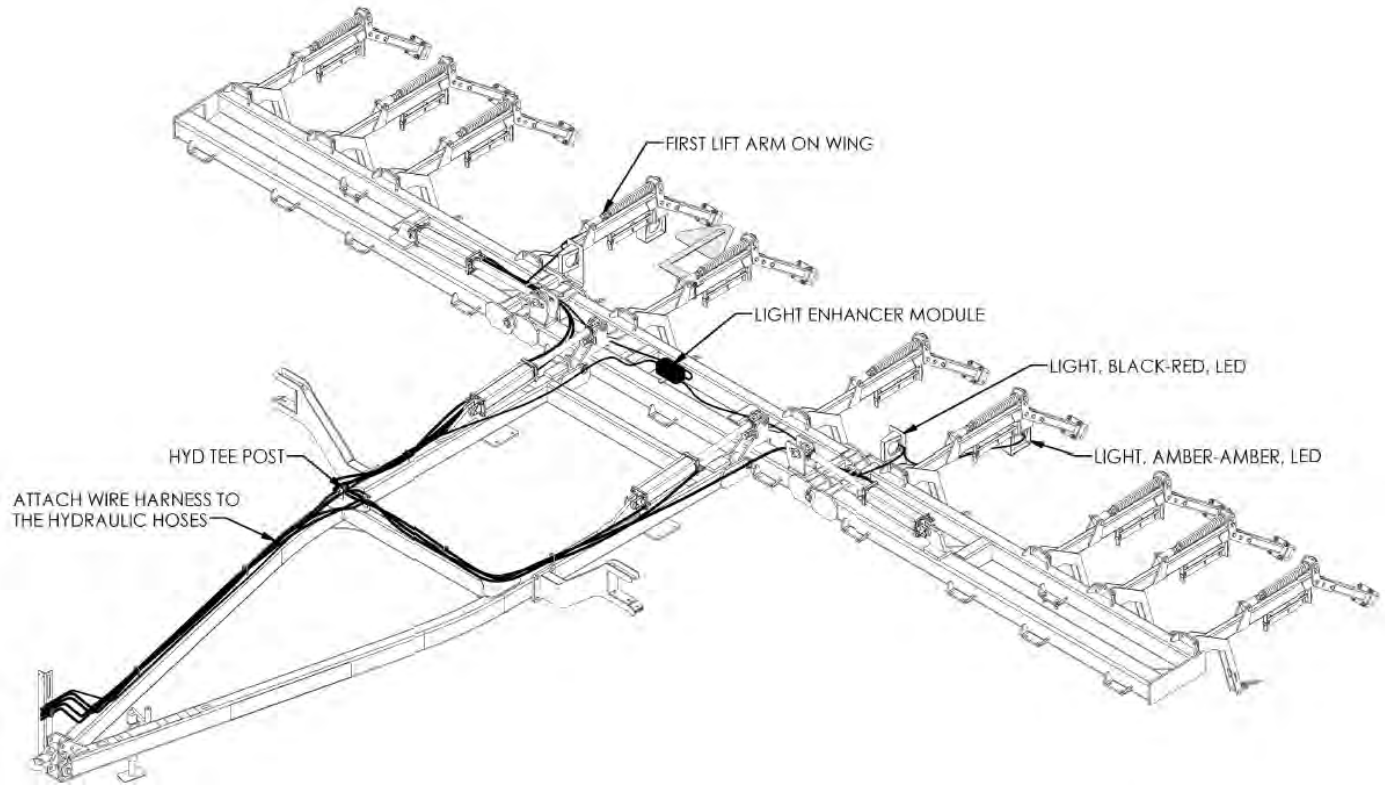
7. Connect the free ends of the extension harnesses to the lights.



8. 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.

9. 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.

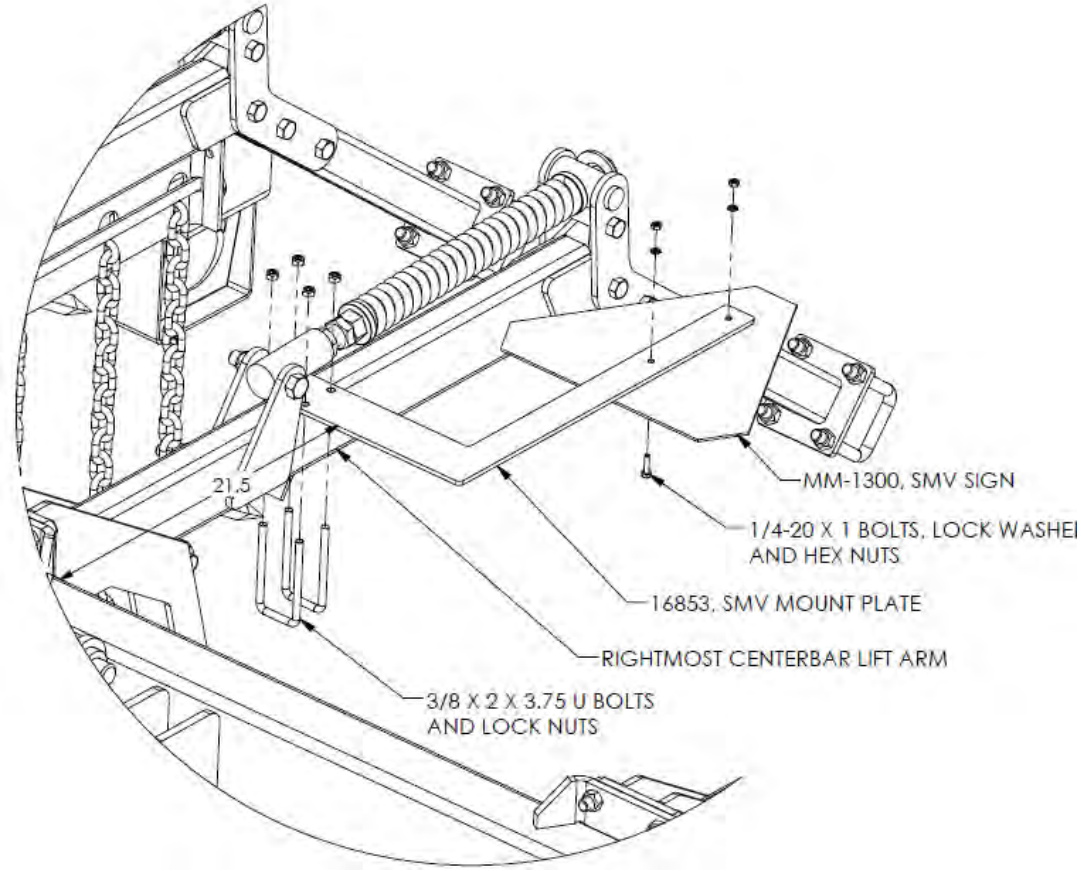
10. Attach the unit to a tractor and plug in the lights. Check to make sure that they are working properly and that the wires do not pull or get caught when folding the unit into the transport position. With the unit in transport position, the lights should be visible from the rear.



Refer to Parts Diagram in Appendix B for part number information.

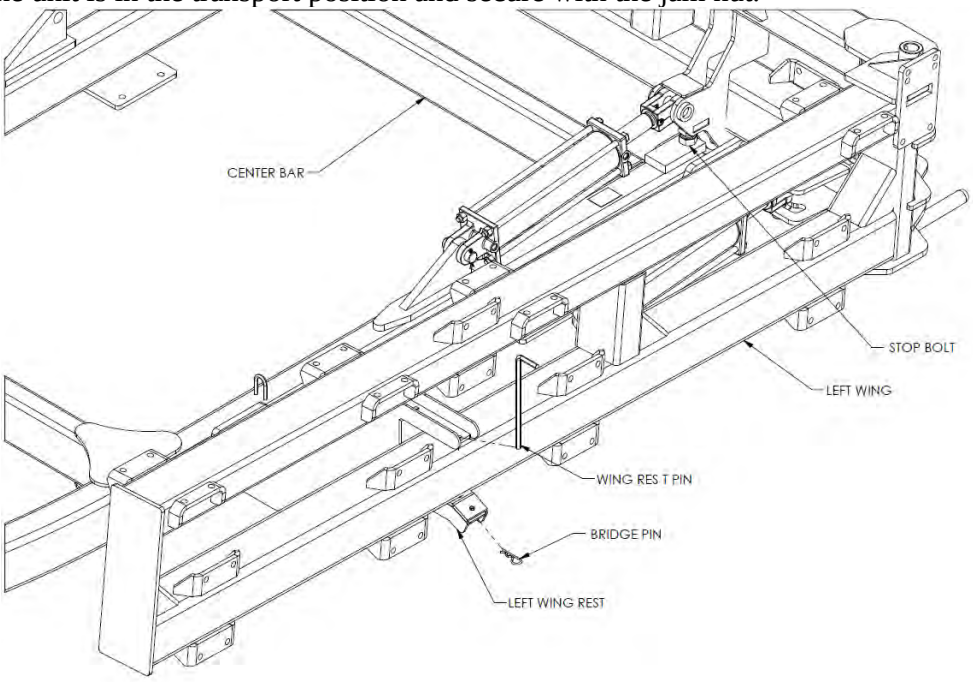
Attach the SMV Sign

1. Secure the SMV sign to the mounting plate using the 1/4-20 x 1 hex bolts, lock washers and hex nuts.
2. Attach the SMV mount plate to the rightmost lift arm on the center bar 21.5” away from edge of center bar using the 3/8 x 2 x 3.75 U-bolts and locking nuts as shown.



Adjust the Wing Rests

1. Adjust the position of the wing rests so that they provide support to the wings while in the transport position. Refer to Figure 26. 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.



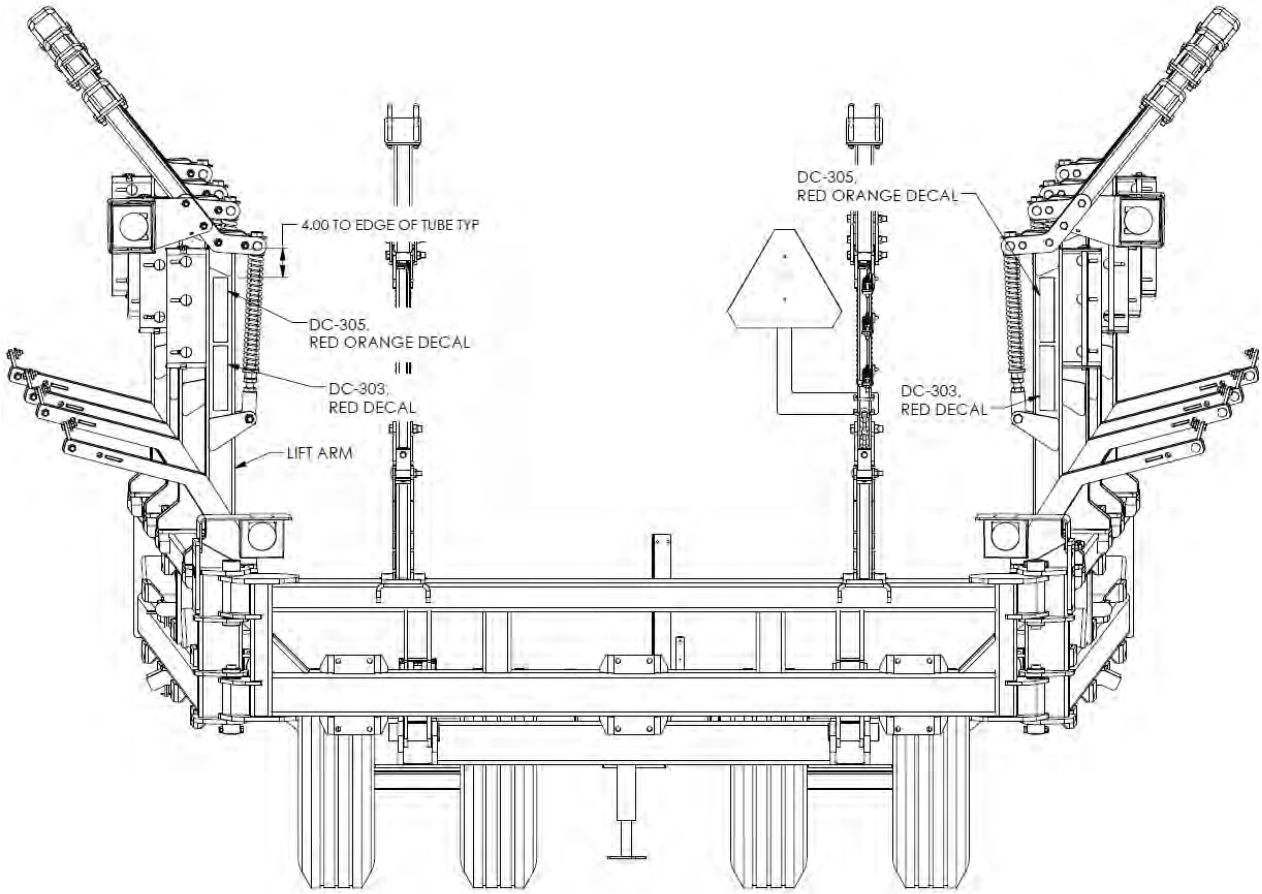
Main hinge plate stop bolt MUST be adjusted AFTER cylinder has been adjusted. When adjusted properly, tighten all bolts.

Both Stop Bolts need to be adjusted so that they hit the Main Hinge Plate simultaneously to avoid twisting the Center Bar.

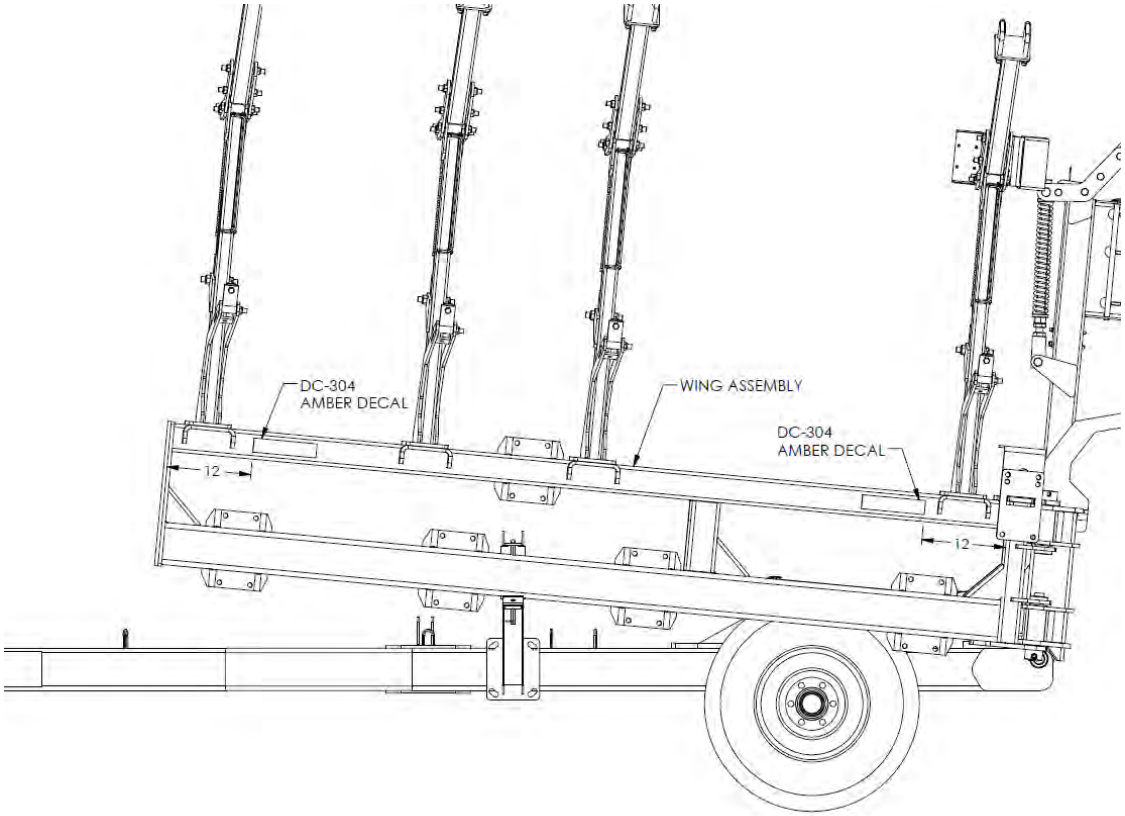
Be sure to pin the wings into the wing rests for security during transport. For transport, secure the wings in the wing rests with the wing rest pin and bridge pin.

Apply the Reflective Decals

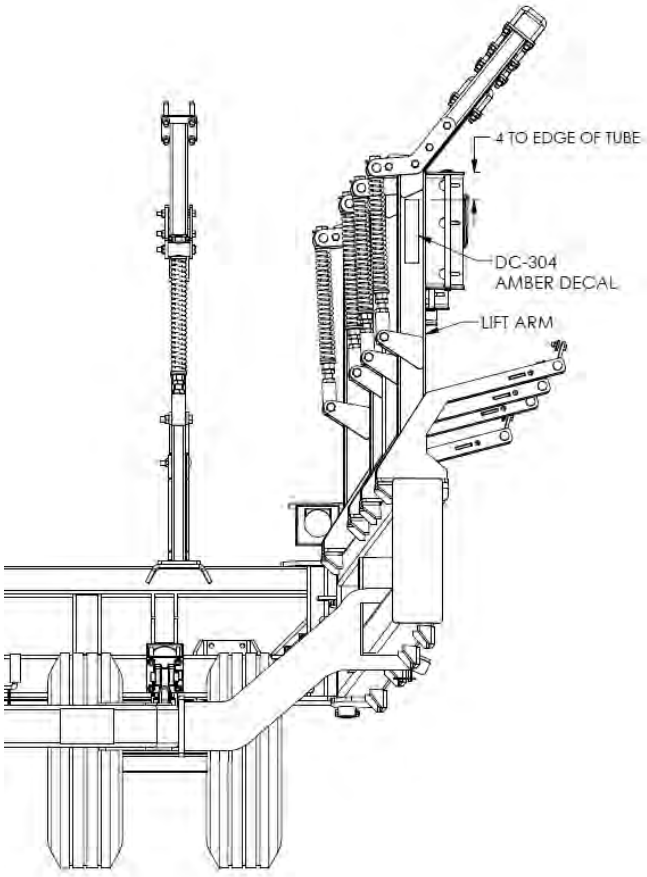
1. Apply the red/orange fluorescent (DC-305) and the red retroreflective (DC-303) decals to the centermost wind lift arm as shown below.



2. Apply the amber retroreflective (DC-304) decals to both wings as shown.



3. Apply the amber retroreflective (DC-304) decals to both of the forward most lift arms, so that they are visible from the front as shown here.



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

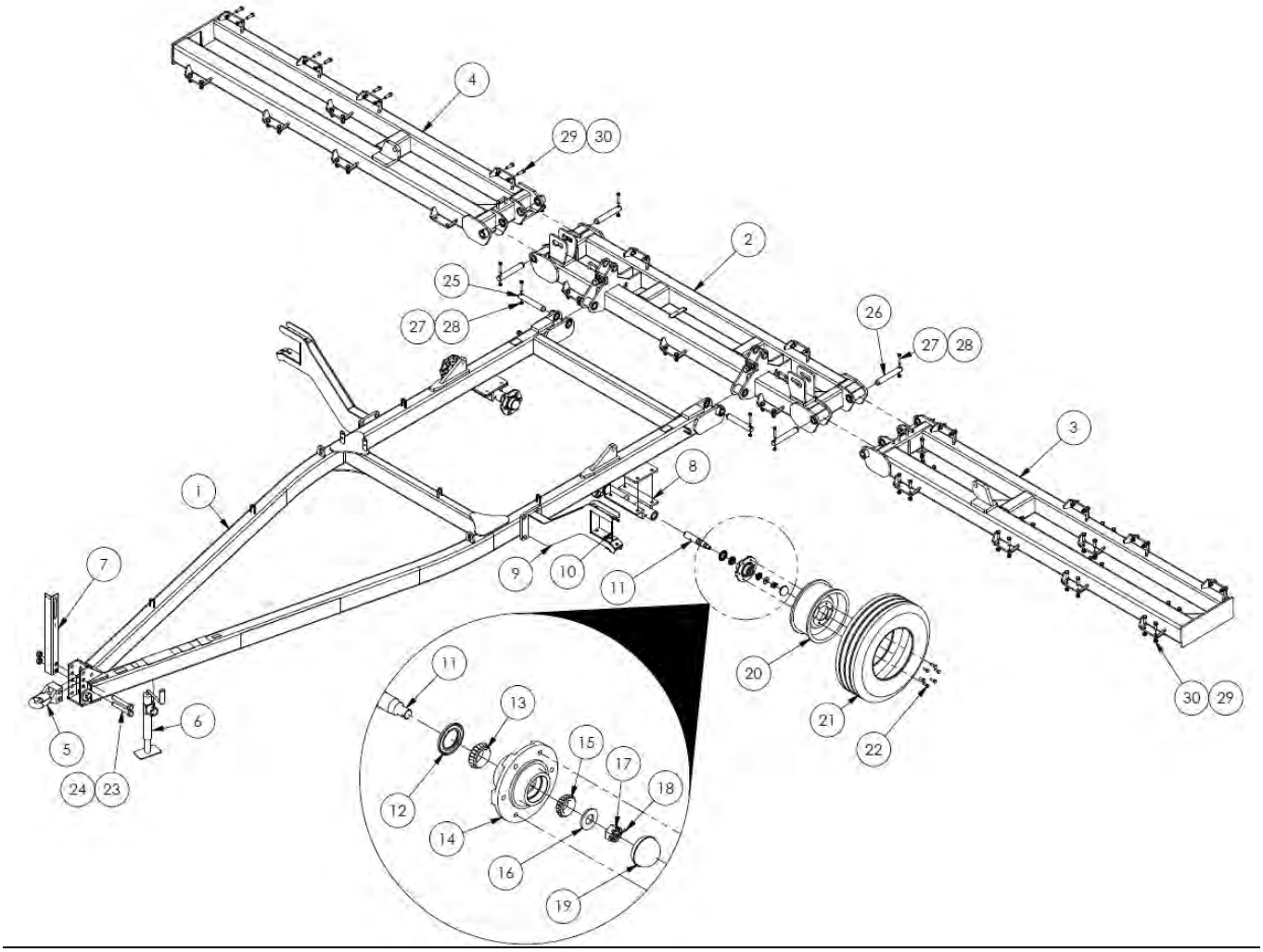
Fine Thread Series		
Nut Size and Threads per Inch	Nut Tightening Torque (lb.ft.)	
Grade C Nuts		
	Max.	Min.
1/4 - 28	14.7	10
5/16 - 24	23.4	18.4
3/8 - 24	41	30
7/16 - 20	60	44
1/2 - 20	98	70
9/16 - 18	134	98
5/8 - 18	176	127
3/4 - 16	295	218
7/8 - 14	440	317
1 - 14	703	610

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

PARTS DIAGRAMS AND LISTS

C3-7000 CRIMPER PARTS DIAGRAM



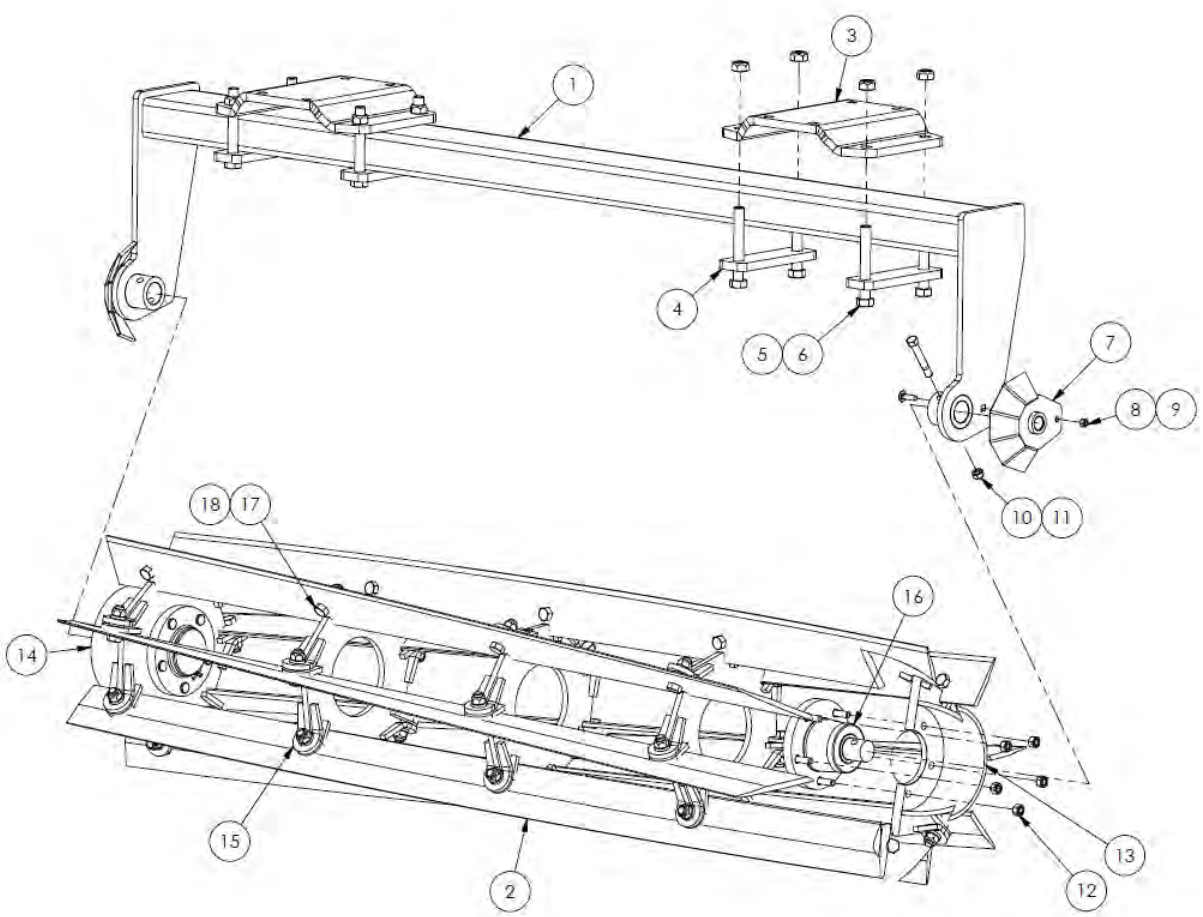
KEY	PART #	DESCRIPTION
1	16822	FRAME,MAIN (7020)
	17017	FRAME,MAIN (7030)
	16029	FRAME, MAIN (7040)
2	16797	CENTER BAR, PULL TYPE CRIMPER (7020, 7030)
	15939	FRAME,CENTER BAR,C3,10' (7040)
3	16801	WING, LT, PULL TYP CRIMPER (7020)
	16825	WING, LT, PULL TYP CRIMPER (7030)
	15947	LT WING, PULL TYPE CRIMPER (7040)
4	16803	WING, RT, PULL TYP CRIMPER (7020)
	16826	WING, RT, PULL TYP CRIMPER (7030)
	15949	RT WING, PULL TYPE CRIMPER (7040)
5	15758	HITCH,PINTLE,CATIII
6	HD-1151	JACK, RND-10", TOP, 2000# (7020, 7030)
	QT-1243	JACK, SIDEWIND,15",8000# (7040)
7	11948	BRACKET,HITCH STORAGE
8	WDL-2500	DUAL AXLE
9	12474	ASM,BRACKET,WING REST,6" (7020, 7030)

	12477	ASM,BRACKET,WING REST,8" (7040)
10	11312	PIN
11	WDL-2505	SPINDLE
12	HD-1360	GREASE SEAL, 6-HOLE HUB
13	HD-1362	INNER BEARING, 6-HOLE HUB
14	HD-1361	HUB WITH RACES, 6-HOLE HUB
15	HD-1363	OUTER BEARING, 6/8 HOLE HUB
16	HD-1364	SPINDLE FLAT WASHER, 6-HOLE HUB
17	HD-1365	SPINDLE HEX NUT, 6-HOLE HUB
18	CP-1517	PIN, COTTER, .150 x 1 3/4
19	HD-1367	DUST CAP,6-HOLE HUB
20	HD-1368	RIM, 15x8, 6-BOLT, 2900LB
21	12490	TIRE,IF280/70R15
22	WB-5010	WHEEL BOLT, 1/2 x 1.25
23	BHY-1065	BOLT,HEX,1-8X6.5,GD8
24	NLT-1008	NUT, TOP LOCK, 1
25	SPR-2712	PIN,STRAIGHT (7020, 7030)
	RT-2107	PIN,STRAIGHT (7040)
26	RT-2107	PIN,STRAIGHT
27	BHY-5030	BOLT,HEX,1/2-13X3,GD8
28	NLT-5013	NUT,LOCK,TOP,1/2-13
29	BH-6320	BOLT,HEX,5/8-11X2,GD5
30	NLT-6311	NUT,LOCK,TOP,5/8-11

Refer to the step-by-step assembly instructions for additional details.

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

DURA CRIMPER PARTS DIAGRAM



KEY	PART #	DESCRIPTION
1	14150	MOUNT,REEL,CRIMPER,36" (14164)
	13825	MOUNT,REEL,CRIMPER,51" (14163)
	14698	MOUNT,REEL,CRIMPER,58"(14700)
	14307	MOUNT,REEL,CRIMPER,66" (14308)
	15791	MOUNT,REEL,CRIMPER,80" (15790)
	16185	MOUNT,REEL,CRIMPER,95" (16184)
	16810	MOUNT,REEL,CRIMPER,109" (16811)
	SPR-5036	BLADE,SPIRAL,36" (14164)
	SPR-5051	BLADE,SPIRAL,51" (14163)
	SPR-5058	BLADE, SPIRAL,58" (14700)
	SPR-5066	BLADE, SPIRAL, 66" (14308)
2	SPR-5080	BLADE,SPIRAL,80" (15790)
	SPR-5095	BLADE,SPIRAL,95" (16184)
	SPR-5008	BLADE,SPIRAL,108" (16811)
3	16124	MOUNT PLATE, DURAREEL
4	16125	PLATE,CLAMP
5	BHY-7555	BOLT,HEX,3/4-10X5.5,GD8

6	NLT-7510	NUT,LOCK,TOP,3/4-10
7	13827	GUARD,REEL HUB
8	NLT-3816	NUT,LOCK,TOP,3/8-16
9	14648	BOLT,CARRIAGE,3/8-16X1.25,GD5 (14164,14163, 14700,14308, 15790, 16184)
	BC-5015	BOLT,CARRIAGE,1/2-13X1.5,GD5 (16811)
10	NLT-5013	NUT,LOCK,TOP,1/2-13
11	RD-5055	BOLT,HEX,1/2-13x3.25,GD8,SPL
12	NL-5020	NUT,LOCK,CENTER,1/2-20
13	14850	BRACKET,SPIRAL BLADE,HUB, LH
14	14851	BRACKET,SPIRAL BLADE,HUB, RH
15	16003	BRACKET,DURA-CRIMPER,OPEN
16	RD-4854	HUB w/SPINDLE, 5 BOLT REEL
17	BHP-6323	BOLT,HEX,5/8-11X2.25,GD5,PLAIN
18	NLT-6311	NUT,LOCK,TOP,5/8-11

Refer to layout diagram for position and size on each unit.

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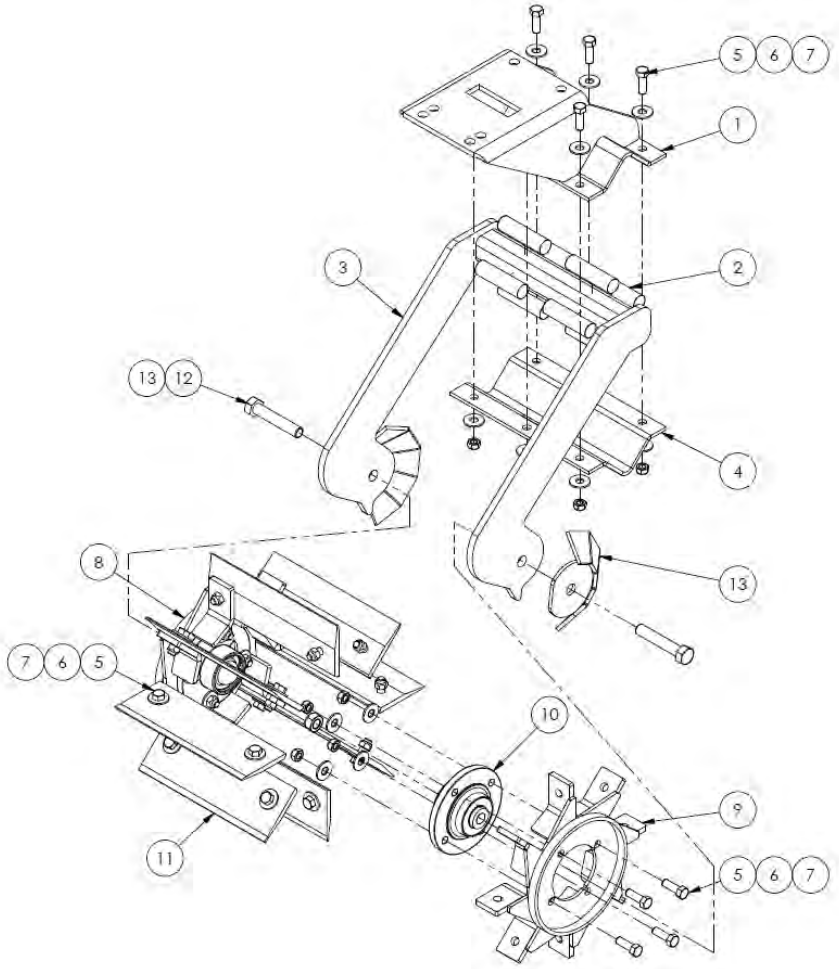
GAP REEL PARTS DIAGRAM

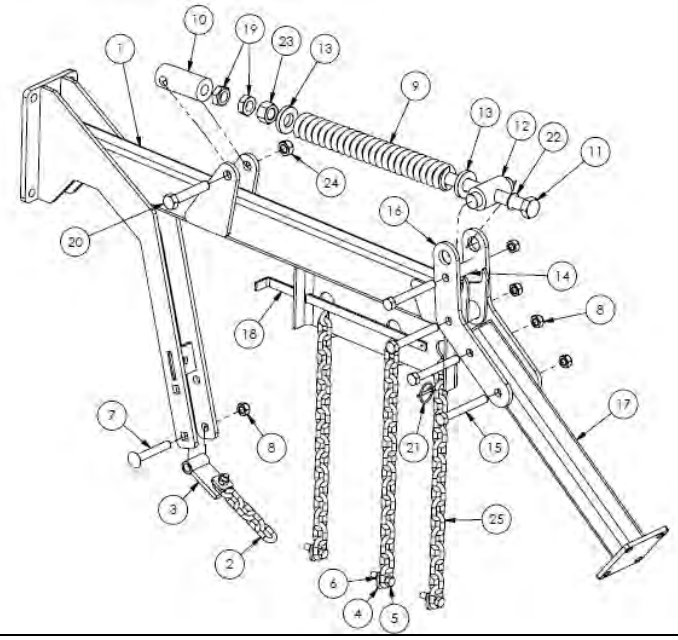


KEY	PART #	DESCRIPTION
1	16454	CLAMSHELL SUB (16458)
	16805	CLAMSHELL SUB, RH (16807)
	16806	CLAMSHELL SUB, LH (16808)
2	16529	RUBBER CORD
3	16457	CRIMPER ARM SUB
4	16514	PLATE, BENT
5	BH-5015	BOLT,HEX,1/2-13X1.5.GD5
6	FW-0050	WASHER,FLAT,.5,GD2
7	NLT-5013	NUT,LOCK,TOP,1/2-13
8	14382	REEL,CHOPPER,8-15” BLADE,LT
9	14383	REEL,CHOPPER,8-15” BLADE,RT
10	12713	ASM,HUB
11	16479	BLADE,BEVELED,12”
12	BH-7540	BOLT,HEX,3/4-10X4,GD5
13	NLT-7510	NUT,LOCK,TOP,3/4-10
14	14387	BEARING GUARD

Refer to layout diagram for position and size on each unit.

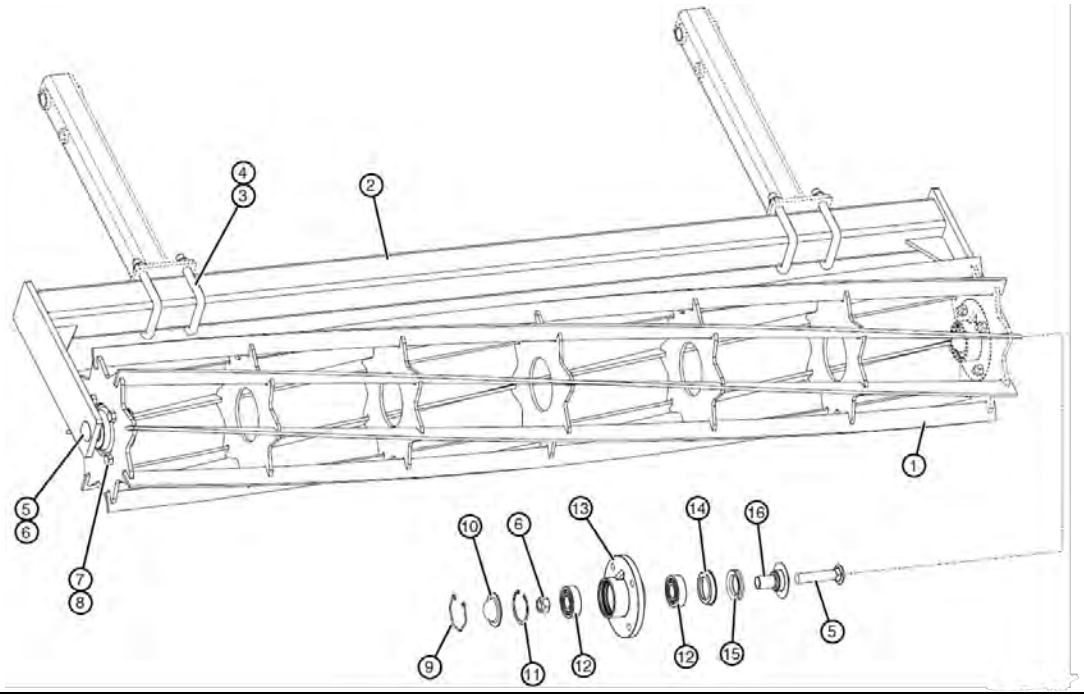
McFarlane Manufacturing reserves the right to change specifications of design at any time without obligation to modify previous products.

3 BAR HARROW SECTION WITH ROLLING BASKET LIFT ARM PARTS DIAGRAM



KEY	PART #	DESCRIPTION
1	10962	LIFT ARM,3 BAR
2	CH-0805	CHAIN, 3/8 x 18-LINK
3	FA-4105	PLATE,PIVOT
4	HDD-016	SQUARE WASHER, 1/2"
5	BH-5018	BOLT,HEX,1/2-13X1.75,GD5
6	NLT-5013	NUT,LOCK,TOP,1/2-13
7	BC-6340	BOLT, CARRIAGE, 5/8 X 4
8	NLT-6311	NUT,LOCK,TOP,5/8-11
9	10682	SPRING, COMPRESSION
10	10713	TUBE,ROUND,ADJUSTMENT
11	10959	BOLT,SPECIAL,1-8 x 23.8 GD5
12	10714	BUSHING,TRUNNION
13	10715	WASHER
14	10716	TUBE,ROUND
15	BH-6350	BOLT,HEX,5/8-11X5,GD5
16	14676	PLATE,PIVOT
17	14674	PIVOT TUBE
18	10957	FLAT, LIFT CHAIN BRACKET LOCK
19	NHJ-1008	NUT, JAM 1-8
20	BH-7540	BOLT,HEX,3/4-10X4,GD5
21	PC-1913	PIN, CLICK 3/16 X 1 9/16
22	FW-0100	WASHER,FLAT,1,F436
23	NH-1008	NUT,HEX,1-8,GD5
24	NLT-7510	NUT,LOCK,TOP,3/4-10
25	CH-0818	CHAIN, 3/8 x 18-LINK

ROLLING BASKET PARTS DIAGRAM

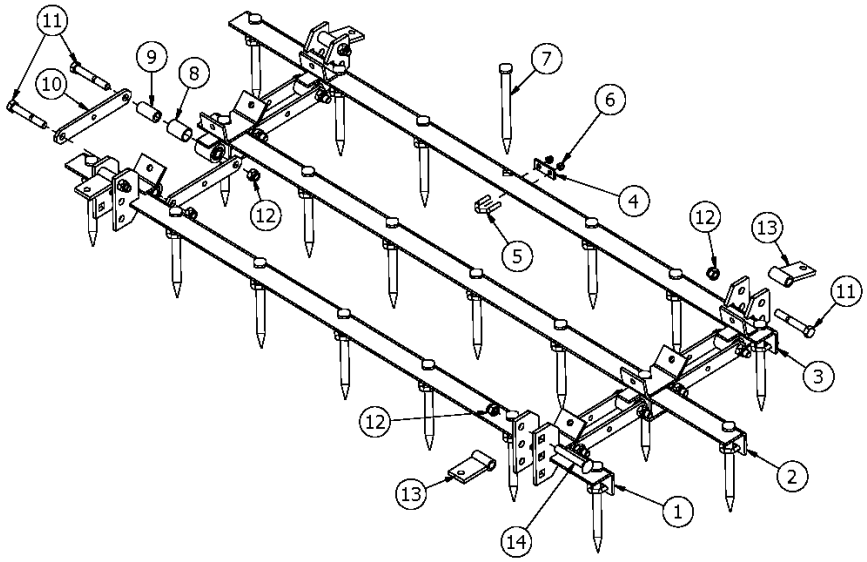


KEY	PART #	DESCRIPTION
1	SRB-1552	ROLLING BASKET – 52” (12714)
	SRB-1563	ROLLING BASKET – 63” (12830)
	SRB-1585	ROLLING BASKET – 85” (12712)
	14718	ROLLING BASKET – 117” (14717)
2	RD-5080	BASKET MOUNT TUBE – 52” (12714)
	RD-5079	BASKET MOUNT TUBE – 63” (12830)
	RD-5077	BASKET MOUNT TUBE – 85” (12712)
	14719	BASKET MOUNT TUBE – 117” (14717)
3	NLT-6311	NUT, TOP LOCK 5/8-11
4	BU-5834	5/8” U BOLT
5	BC-7535	BOLT, CARRIAGE, 3/4-10 X 3-1/2, GRADE 5
6	NLT-7510	NUT, TOP LOCK, 3/4-10
7	BH-5018	BOLT, HEX, 1/2-13 X 1-3/4 GRADE 5
8	NLT-5013	NUT, TOP LOCK, 1/2-13
9	13081	RETAINING RING
10	13078	DUST CAP
11	13076	SNAP RING
12	13074	BEARING,SEALED,1" ID
13	13080	HUB
14	13079	SEAL COUNTERFACE
15	13075	V-SEAL,1.59" ID
16	13077	BEARING SLEEVE W/GUARD

Refer to layout diagram for position and size on each unit.

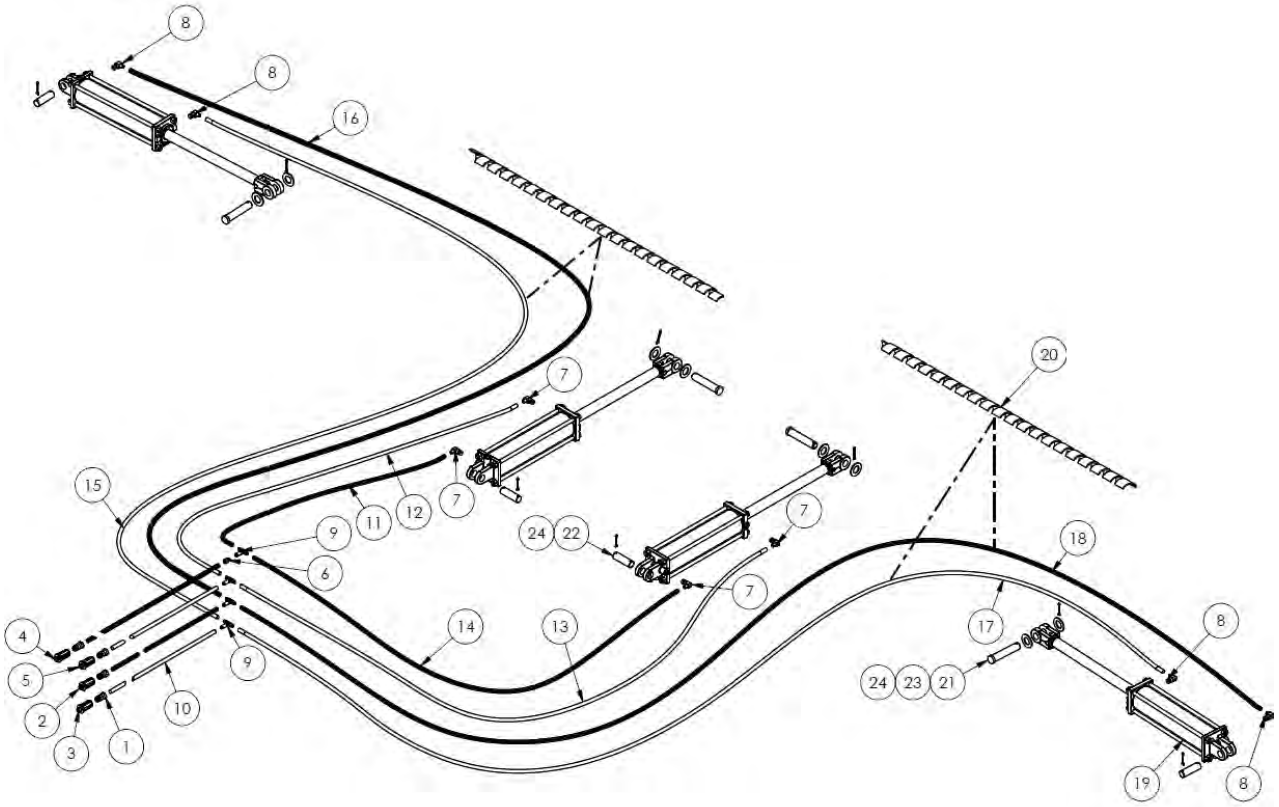
McFarlane Manufacturing reserves the right to change specifications of design at any time without obligation to modify previous products.

FA-3 BAR HARROW SECTIONS



KEY	PART #	DESCRIPTION
1	FA-551	#1 HARROW BAR (FA-500-3)
	FA-651	#1 HARROW BAR (FA-600-3)
	FA-751	#1 HARROW BAR (FA-700-3)
	FA-851	#1 HARROW BAR (FA-800-3)
	FA-951	#1 HARROW BAR (FA-900-3)
2	FA-556	#2 HARROW BAR (FA-500-3)
	FA-656	#2 HARROW BAR (FA-600-3)
	FA-756	#2 HARROW BAR (FA-700-3
	FA-856	#2 HARROW BAR (FA-800-3)
	FA-956	#2 HARROW BAR (FA-900-3)
3	FA-557	#3 HARROW BAR (FA-500-3)
	FA-657	#3 HARROW BAR (FA-600-3)
	FA-757	#3 HARROW BAR (FA-700-3)
	FA-857	#3 HARROW BAR (FA-800-3)
	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

C3-7000 HYDRAULICS
PARTS DIAGRAM



***Dark lines indicate pressure supply side**

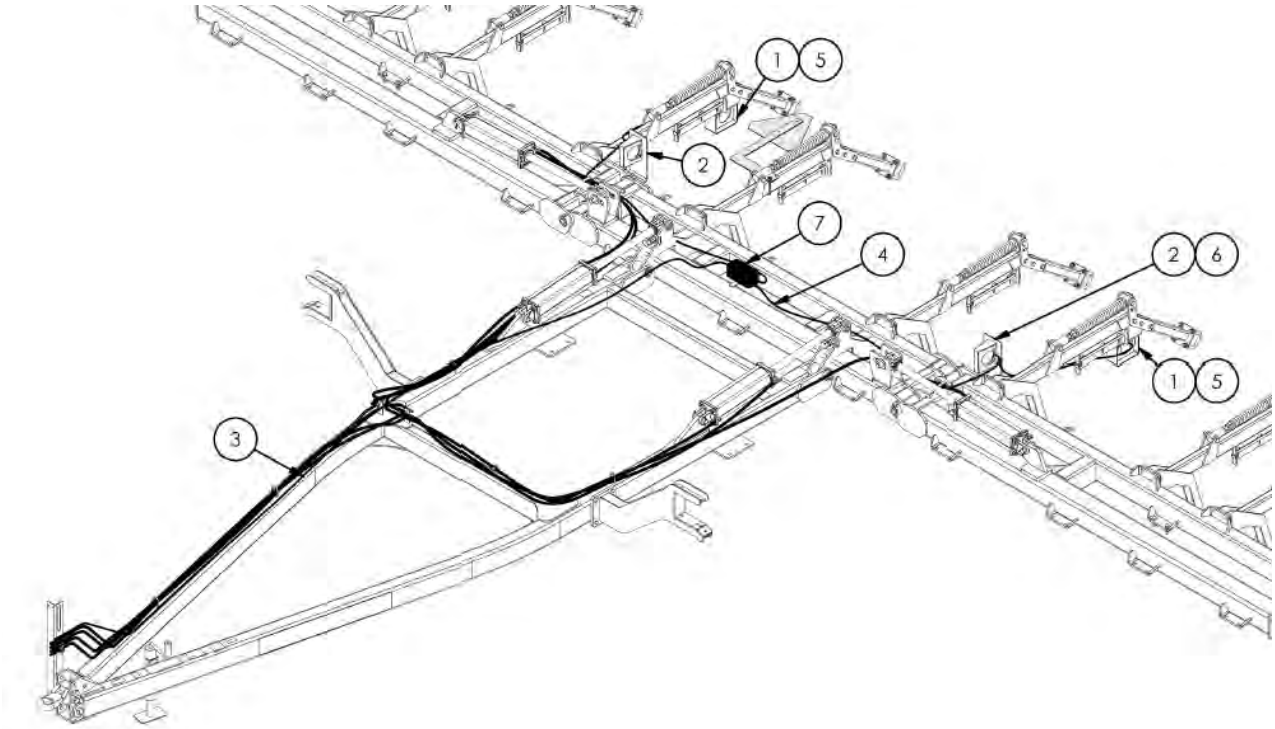
KEY	PART #	DESCRIPTION	QTY.
1	15641	HYD DISCONNECT,MALE,3/4ORB	1
2	15036	HYDRA GRIP,SUPPLY,YELLOW	1
3	15037	HYDRA GRIP,RETURN,YELLOW	1
4	15032	HYDRA GRIP,SUPPLY,RED	1
5	15033	HYDRA GRIP,RETURN,RED	1
6	11391	HYD RESTRICTOR,9/16F-9/16M,1/16	1
7	HYF-2820	HYD ELBOW, 9/16M - 3/4Morb	4
8	HYF-2821	HYD ELBOW,9/16M-3/4Morb,RST	4
9	HYF-1888	HYD TEE,9/16M-9/16M-9/16M	4
10	15636	HYD HOSE,3/8(9/16F-3/4Morb),192 (7020, 7030)	4
	16025	HYD HOSE,3/8(9/16F-3/4Morb),246 (7040)	
11	12372	HYD HOSE,3/8(9/16F-9/16F 90°),50 (7020, 7030)	4
	12211	HYD HOSE,3/8(9/16F-9/16F 90°),73 (7040)	
12	12373	HYD HOSE,3/8(9/16F-9/16F 90°),70 (7020, 7030)	1
	12212	HYD HOSE,3/8(9/16F-9/16F 90°),93 (7040)	
13	HYH-8126	HYD HOSE,3/8(9/16F),126 (7020, 7030)	1
	12214	HYD HOSE,3/8(9/16F),164 (7040)	
14	12374	HYD HOSE,3/8(9/16F),106 (7020, 7030)	1
	12213	HYD HOSE,3/8(9/16F),144 (7040)	
15	HYH-8137	HYD HOSE,3/8(9/16F),137 (7020, 7030)	1

	12214	HYD HOSE,3/8(9/16F),164 (7040)	
16	HYH-8156	HYD HOSE,3/8(9/16F),156 (7020, 7030)	1
	HYH-8186	HYD HOSE,3/8(9/16F),186 (7040)	
17	HYH-8186	HYD HOSE,3/8(9/16F),186 (7020, 7030)	1
	12914	HYD HOSE,3/8(9/16F),232 (7040)	
18	13666	HYD HOSE,3/8(9/16F),204 (7020, 7030)	1
	12915	HYD HOSE,3/8(9/16F),250 (7040)	
19	HYA-34016	HYD CYLINDER,4 x 16 ASAE	
20	16903	HOSE SPIRAL WRAP,1" ID,60"	2
21	11968	PIN, CLEVIS, 1-1/4X6	4
22	HYO-2123	PIN, CYLINDER CLEVIS,1-1/4X4	4
23	FW-0125	WASHER, FLAT,1-1/4	8
24	CP-3620	PIN, COTTER,3/16x2	12

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.

C3 7000 LIGHT KIT
PARTS DIAGRAM

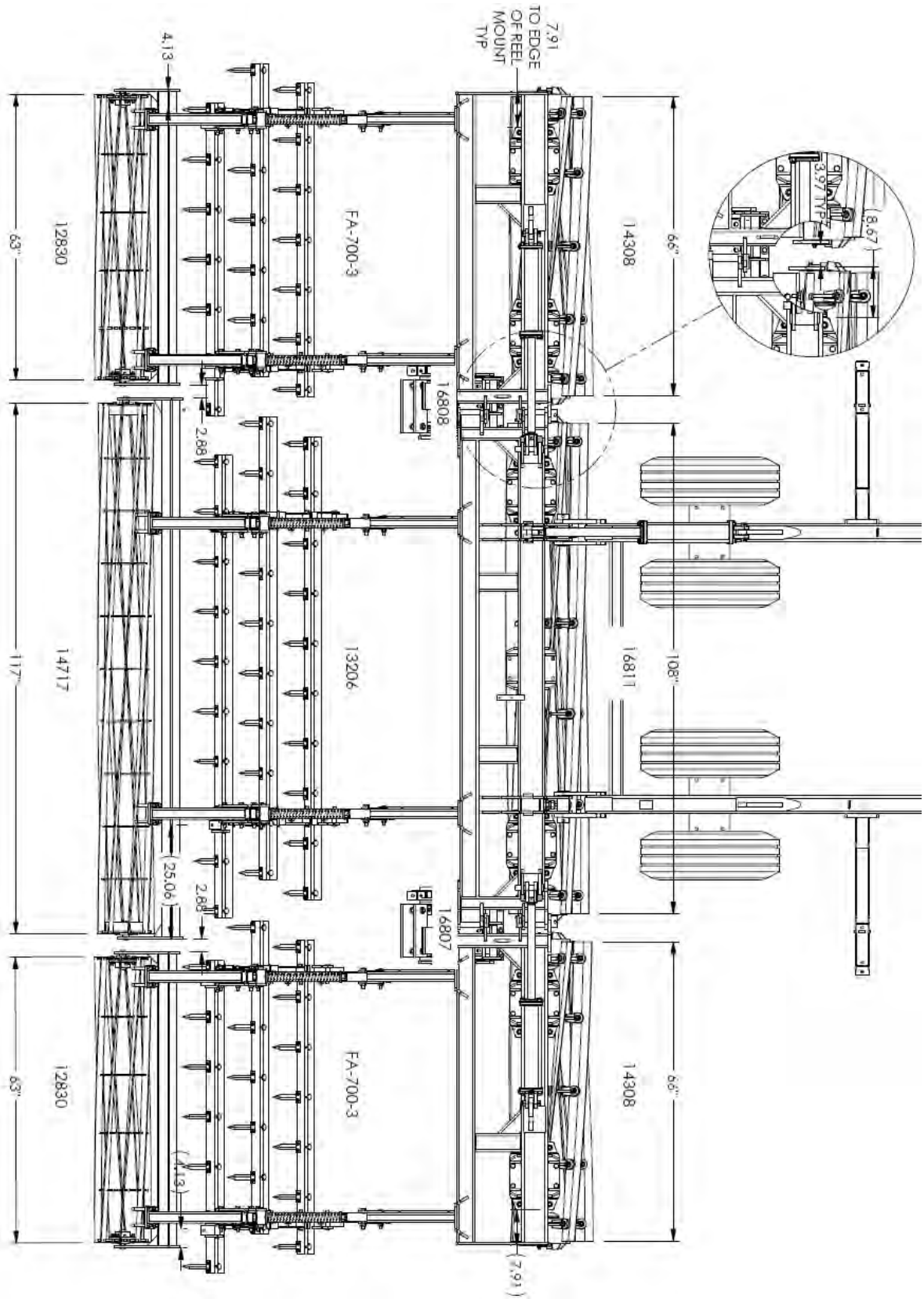


KEY	PART #	DESCRIPTION	QTY.
1	17013	BRACKET,LIGHT	2
2	16216	BRACKET,LIGHT MOUNT	2
3	16254	LIGHT HARNESS,7-PIN/4-PIN,35'	1
4	16214	LIGHT HARNESS,4-PIN/3-2-PIN,13'	2
5	16211	LIGHT,AMBER-AMBER,LED	2
6	16212	LIGHT,RED-BLACK,LED	2
7	16210	LIGHT ENHANCER MODULE	1

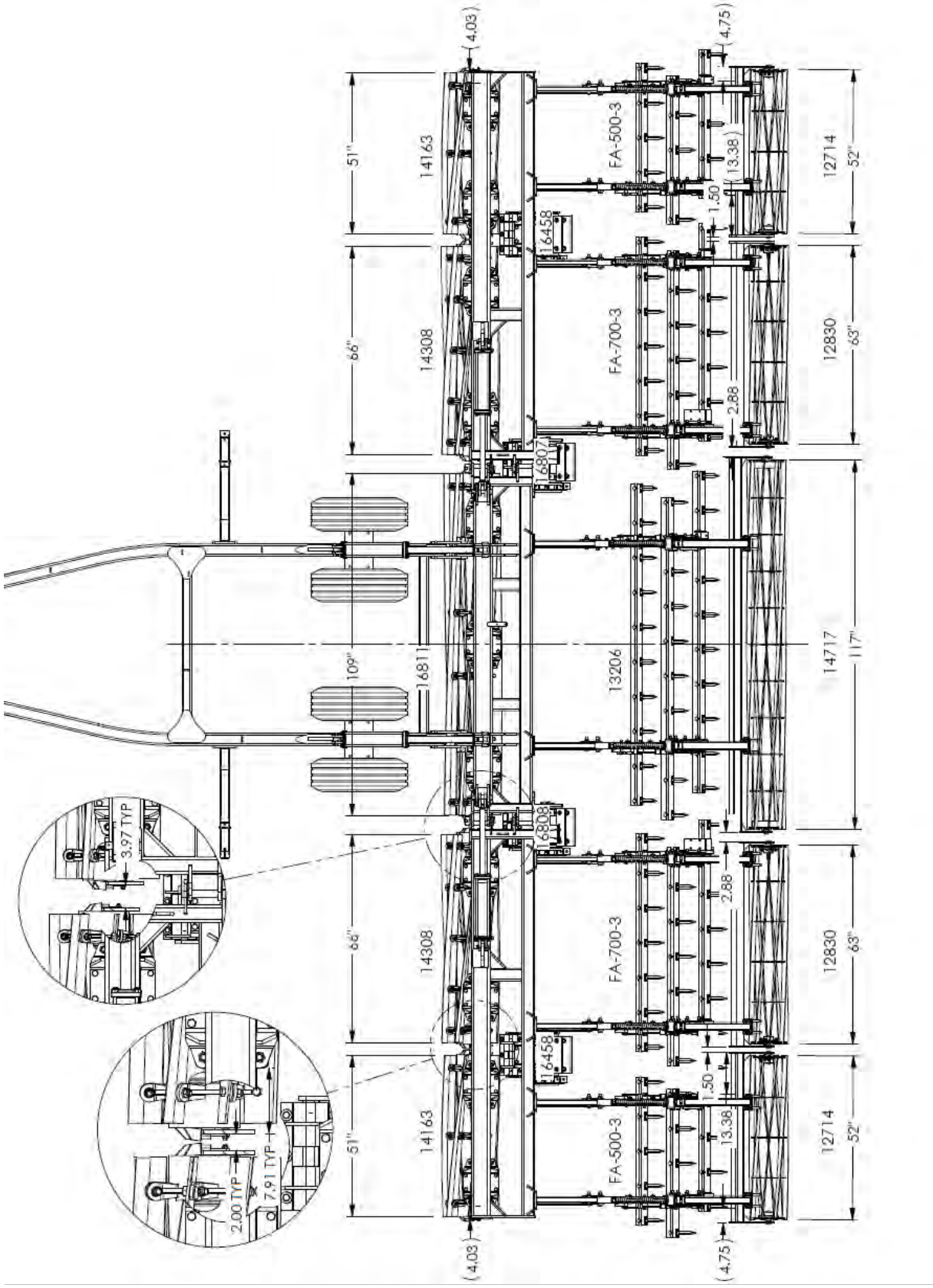
Note: When ordering cylinder replacement parts, please specify cylinder make & part number.

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

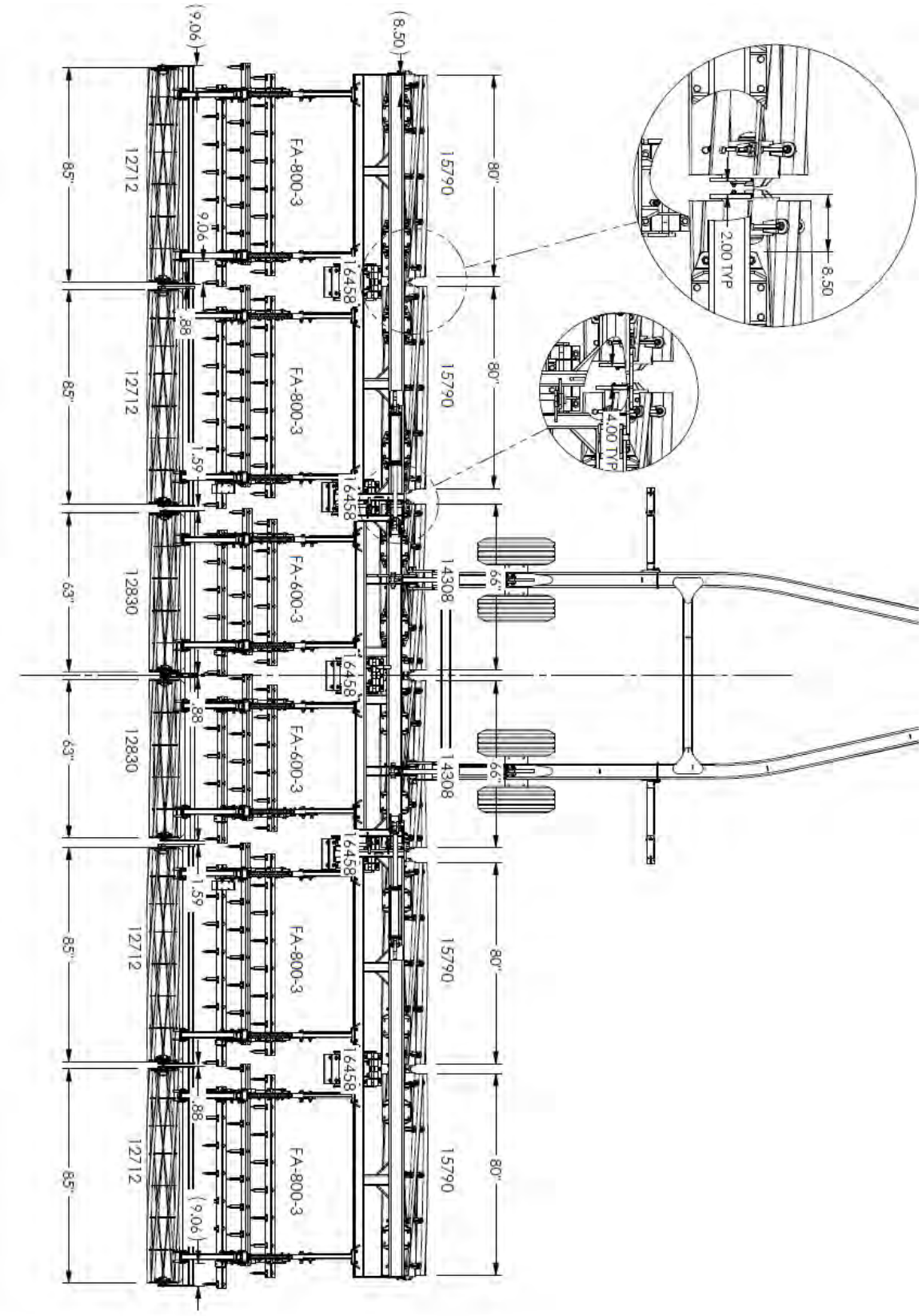
C3-7020 LAYOUT DIAGRAM



C3-7030 LAYOUT DIAGRAM



C3-7040 LAYOUT DIAGRAM



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