

---

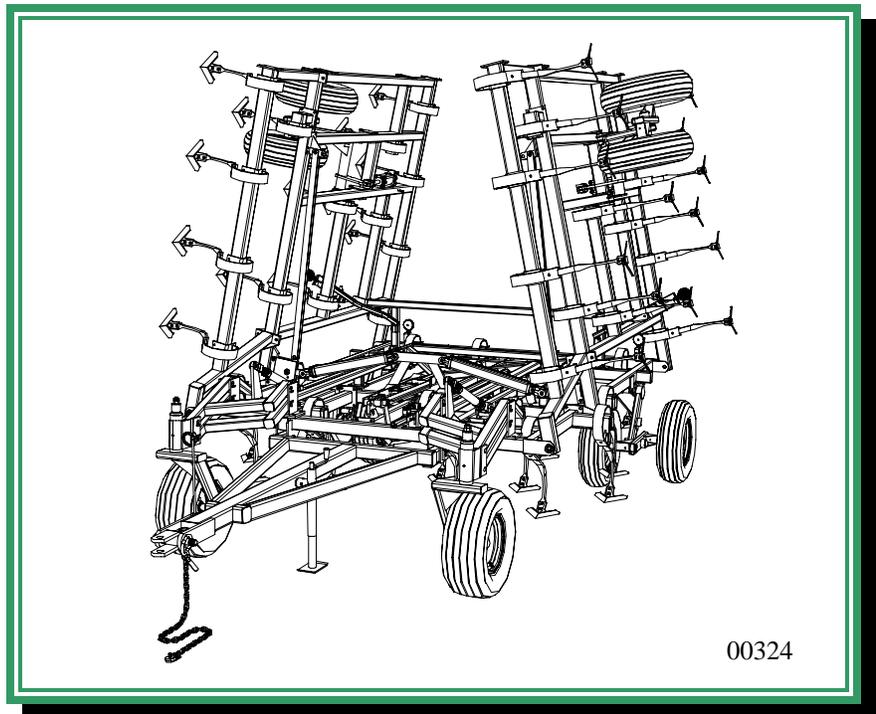
# Operator's Manual

Series VII 6113, 6116, 6318,  
6320, 6323, 6325 & 6328  
**Field Cultivator, Floating Hitch**

 **Great Plains**  
Manufacturing, Inc.



*Read the operator's manual entirely. When you see this symbol, the subsequent instructions and warnings are serious - follow without exception. Your life and the lives of others depend on it.*



*Cover illustration may show optional equipment not supplied with standard unit.*

# Table of Contents

<b>Important Safety Information .....</b>	<b>1</b>	<b>Section 2 Hydraulics .....</b>	<b>24</b>
Safety Rules.....	6	Typical Lift Hose Layout .....	24
Safety Decals .....	7	Typical Fold Hose Layout .....	25
<b>Introduction .....</b>	<b>12</b>	<b>Section 3 Shank Placement .....</b>	<b>26</b>
Description of Unit.....	12	6113 Shank Layout, Floating Hitch .....	26
Using this Manual .....	12	6116 Shank Layout, Floating Hitch .....	27
Definitions.....	12	6318 Shank Layout, Floating Hitch .....	28
Owner Assistance.....	12	6320 Shank Layout, Floating Hitch .....	29
Assembly and Setup Assistance.....	13	6323 Shank Layout, Floating Hitch .....	30
Product Support .....	13	6325 Shank Layout, Floating Hitch .....	31
Pre-Assembly Checklist .....	13	6328 Shank Layout, Floating Hitch .....	32
<b>Section 1 Assembly .....</b>	<b>14</b>	<b>Section 4 Operating and Maintenance</b>	
Center Torque Tube & Walking Beam		<b>Instructions .....</b>	<b>33</b>
Assembly .....	14	Prior To Going To The Field .....	33
6113 & 6116 Wing Frame Assembly .....	15	General Operating Instructions and	
6318-6328 Inside Wing and Wheel Arm		In-Field Adjustments .....	34
Assembly .....	16	Maintenance and Lubrication .....	36
Brace Bar and Wing Brace Assembly .....	17	<b>Section 5 Specification and Capacities .....</b>	<b>37</b>
Wing Fold Bracket Assembly .....	17	<b>Appendix .....</b>	<b>38</b>
Level Bar Assembly .....	18	Torque Values for Common Bolt Sizes .....	38
Caster Wheel Linkage & Hitch Pole		Tire Inflation Chart .....	38
Assembly .....	19	Warranty .....	39
Center Lift Cylinder, Rest Pads and			
Hydraulic Valves Assembly .....	20		
Fold Cylinders and Rocker Arm Assembly .....	21		
Center Wing Stop Assembly .....	22		
Completing Setup .....	23		

© Copyright 2003 All rights Reserved

Great Plains Manufacturing, Inc. provides this publication "as is" without warranty of any kind, either expressed or implied. While every precaution has been taken in the preparation of this manual, Great Plains Manufacturing, Inc. assumes no responsibility for errors or omissions. Neither is any liability assumed for damages resulting from the use of the information contained herein. Great Plains Manufacturing, Inc. reserves the right to revise and improve its products as it sees fit. This publication describes the state of this product at the time of its publication, and may not reflect the product in the future.

Great Plains Manufacturing, Incorporated Trademarks

The following are trademarks of Great Plains Mfg., Inc.: Application Systems, Ausherman, Land Pride, Great Plains

All other brands and product names are trademarks or registered trademarks of their respective holders.

*Printed in the United States of America.*



## Important Safety Information

### Look for Safety Symbol

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



### Be Aware of Signal Words

Signal words designate a degree or level of hazard seriousness.

DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. This signal word is limited to the most extreme situations, typically for machine components that, for functional purposes, cannot be guarded.

WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

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

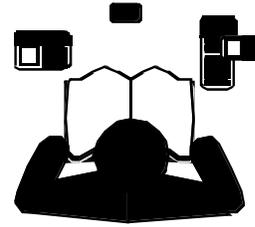
 **DANGER**

 **WARNING**

 **CAUTION**

**Be Familiar with Safety Decals**

- Read and understand “Safety Decals,” page 7, thoroughly.
- Read all instructions noted on the decals.



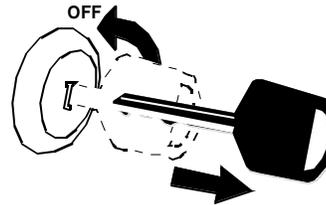
**Keep Riders Off Machinery**

- Riders obstruct the operator’s view. Riders could be struck by foreign objects or thrown from the machine.
- Never allow children to operate equipment.
- Keep all bystanders away from machine during operation.



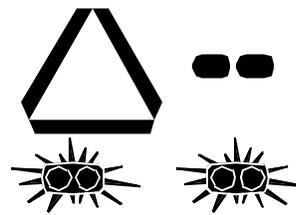
**Shutdown and Storage**

- Lower Series VII Field Cultivator, put tractor in park, turn off engine, and remove the key.
- Secure Series VII Field Cultivator using blocks and supports provided.
- Detach and store Series VII Field Cultivator in an area where children normally do not play.



**Use Safety Lights and Devices**

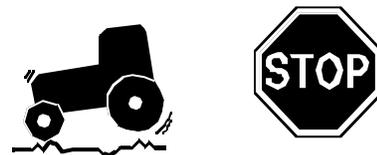
- Slow-moving tractors and towed implements can create a hazard when driven on public roads. They are difficult to see, especially at night.
- Use flashing warning lights and turn signals whenever driving on public roads.
- Use lights and devices provided with implement.



## Transport Machinery Safely

Maximum transport speed for implement is 20 mph. Some rough terrains require a slower speed. Sudden braking can cause a towed load to swerve and upset.

- Do not exceed 20 mph. Never travel at a speed which does not allow adequate control of steering and stopping. Reduce speed if towed load is not equipped with brakes.
- Comply with state and local laws.
- Do not tow an implement that, when fully loaded, weighs more than 1.5 times the weight of towing vehicle.
- Carry reflectors or flags to mark tractor and implement in case of breakdown on the road.
- Keep clear of overhead power lines and other obstructions when transporting. Refer to transport dimensions under "Specifications and Capacities," page 37.
- Do not fold or unfold the wings while the tractor is moving.



## Avoid High Pressure Fluids

Escaping fluid under pressure can penetrate the skin, causing serious injury.

- Avoid the hazard by relieving pressure before disconnecting hydraulic lines.
- Use a piece of paper or cardboard, NOT BODY PARTS, to check for suspected leaks.
- Wear protective gloves and safety glasses or goggles when working with hydraulic systems.
- If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result.



## Practice Safe Maintenance

- Understand procedure before doing work. Use proper tools and equipment. Refer to this manual for additional information.
- Work in a clean, dry area.
- Lower the Series VII Field Cultivator, put tractor in park, turn off engine, and remove key before performing maintenance.
- Make sure all moving parts have stopped and all system pressure is relieved.
- Inspect all parts. Make sure parts are in good condition and installed properly.
- Remove buildup of grease, oil or debris.
- Remove all tools and unused parts from Series VII Field Cultivator before operation.



## Prepare for Emergencies

- Be prepared if a fire starts.
- Keep a first aid kit and fire extinguisher handy.
- Keep emergency numbers for doctor, ambulance, hospital and fire department near phone.



## Wear Protective Equipment

- Wear protective clothing and equipment.
- Wear clothing and equipment appropriate for the job. Avoid loose-fitting clothing.
- Because prolonged exposure to loud noise can cause hearing impairment or hearing loss, wear suitable hearing protection such as earmuffs or earplugs.
- Because operating equipment safely requires your full attention, avoid wearing radio headphones while operating machinery.



## Handle Chemicals Properly

- Agricultural chemicals can be dangerous. Improper use can seriously injure persons, animals, plants, soil and property.
- Read and follow chemical manufacturer's instructions.
- Wear protective clothing.
- Handle all chemicals with care.
- Avoid inhaling smoke from any type of chemical fire.
- Store or dispose of unused chemicals as specified by chemical manufacturer.



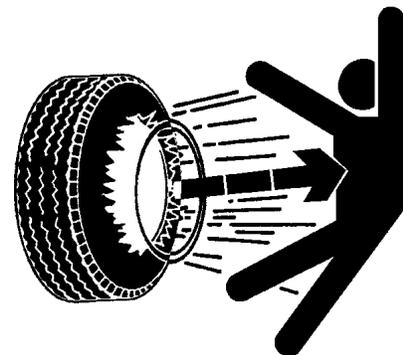
## Use A Safety Chain

- Use a safety chain to help control drawn machinery should it separate from tractor drawbar.
- Use a chain with a strength rating equal to or greater than the gross weight of towed machinery.
- Attach chain to tractor drawbar support or other specified anchor location. Allow only enough slack in chain to permit turning.
- Replace chain if any links or end fittings are broken, stretched or damaged.
- Do not use safety chain for towing.

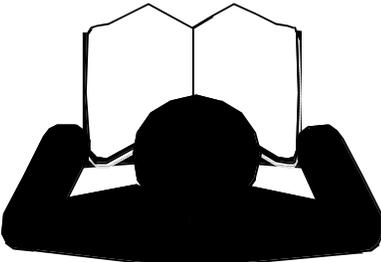


## Tire Safety

- Tire changing can be dangerous and should be performed by trained personnel using correct tools and equipment.
- When inflating tires, use a clip-on chuck and extension hose long enough to you to stand to one side—not in front of or over tire assembly. Use a safety cage if available.
- When removing and installing wheels, use wheel-handling equipment adequate for weight involved.



## Safety Rules

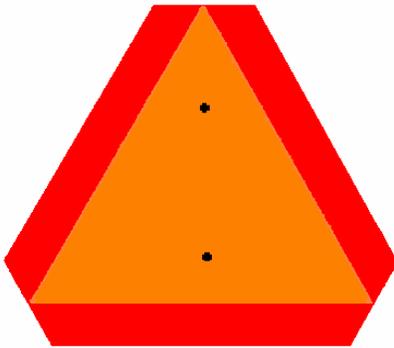
- Thoroughly read and understand the instructions in this manual before operation. Read all instructions noted on the safety decals.
  - Be familiar with all Series VII Field Cultivator functions.
  - Operate machinery from the driver's seat only.
  - Do not leave Series VII Field Cultivator unattended with tractor engine running.
  - Do not transport the field cultivator until the transport position and transport pins and all wing locks are installed.
  - Limit transport speed to 20 m.p.h.
  - Know the transport height of your unit and be extremely careful of overhead electrical and telephone lines when transporting the unit.
  - Know the transport width of your machine and the width of bridges, etc... on the transport route.
  - Make sure that no one is near the machine during field operation and folding or unfolding of wing sections.
  - Prior to removing any lift cylinders from the machine, lower implement to the ground, shut off the tractor and release the pressure in the lines.
  - Do not depend on cylinders to hold the weight of machine during storage; use the transport locks.
  - Do not walk or stand on any part of the machine. Never allow anyone to ride on the field cultivator.
  - Use extreme care when hitching or unhitching the machine from the tractor. In some situations with a heavy finishing attachment, the machine may tip backward causing the hitch to rise rapidly.
  - Never stand with feet under any part of the machine.
- 
- Never allow anyone to walk between the tractor and field cultivator while machine is in operation.
  - Keep hands and feet away from cultivator sweeps. They are quite sharp.
  - Any moving piece of equipment is potentially dangerous. Do not operate until you are absolutely sure the area is clear of children, pets and irresponsible persons.
  - Escaping hydraulic fluid under pressure can have sufficient force to penetrate the skin, causing serious injury. To prevent injury when working with hydraulics, follow the instructions on page 3.
  - Before transporting the unit on public roads, check to make sure the safety reflectors are clean and visible, and not missing or damaged. Turn on tractor warning lights when transporting.
  - Make sure all safety signs are clean, readable and not damaged. Contact Great Plains Mfg. for free replacements if necessary.

## Safety Decals

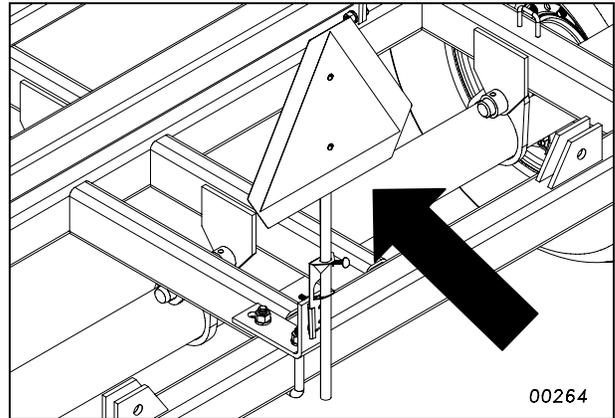
Your implement comes equipped with all safety decals in place. They were designed to help you safely operate your implement.

- Read and follow decal directions.
- Keep all safety decals clean and legible.
- Replace all damaged or missing decals. Order new decals from your Great Plains dealer. Refer to this section for proper placement.

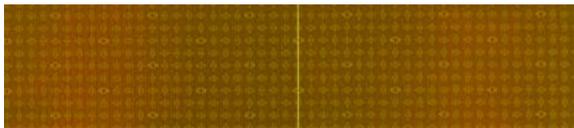
- When ordering new parts or components, also request corresponding safety decals.
- To install new decals:
  1. Clean the area on which the decal is to be placed.
  2. Peel backing from decal. Press firmly on surface, being careful not to cause air bubbles under decal.



Slow Moving Vehicle Emblem  
Quantity 1

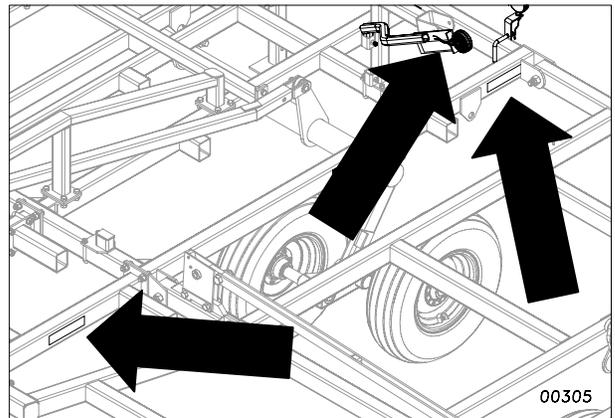


00264



Reflector – Amber  
838-615C

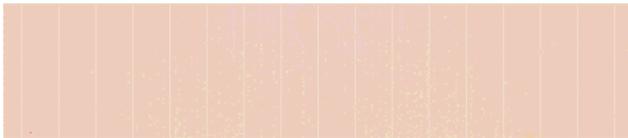
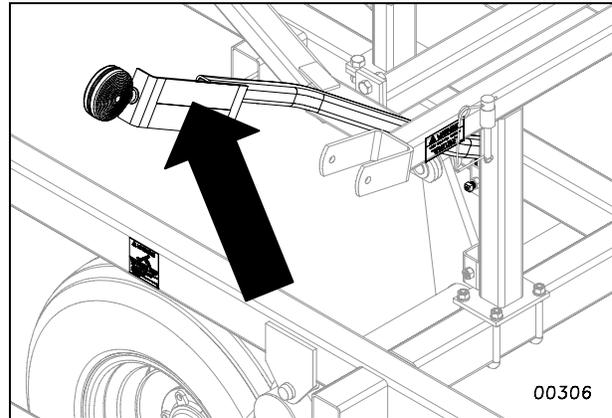
Quantity 8: Two on light bracket, two on center frame and two on center brace bar. Two on rear of finishing attachment (not shown), visible from side while folded for transport.



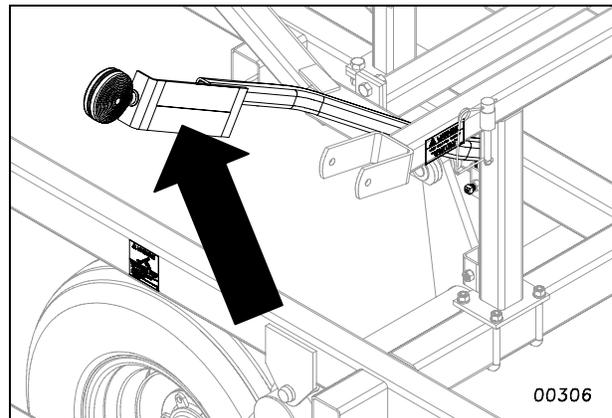
00305



Reflector – Red  
838-614C  
Quantity 2



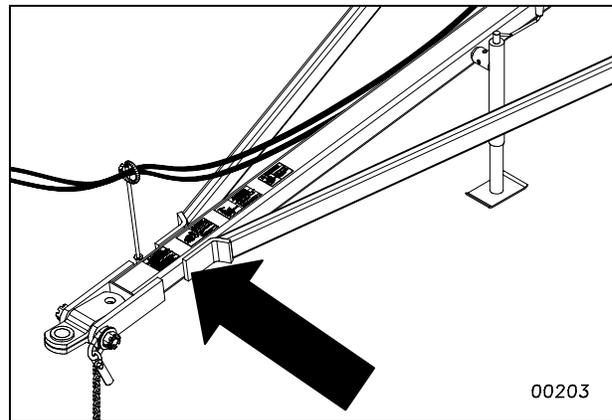
Reflector – Florescent Orange  
838-603C  
Quantity 2



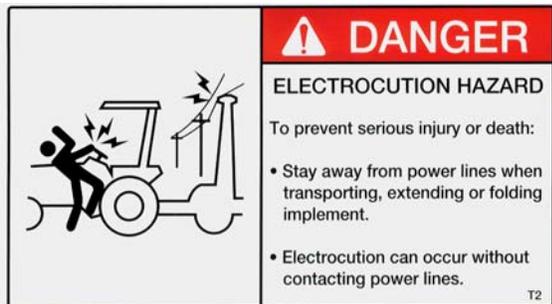
**CAUTION**

1. Read and Understand the Operator's Manual before using machine.
2. Stop tractor engine, lower machine to the ground, place all controls in neutral, set park brake, remove ignition key and wait for all moving parts to stop before servicing, adjusting, repairing, unplugging or fitting.
3. Keep hands, feet, hair and clothing away from earth-working points and blades.
4. Do not allow riders.
5. Clean reflectors, SMV and lights before transporting.
6. Install safety locks before transporting or working beneath components.
7. Add extra lights and use pilot vehicle when transporting during times of limited visibility.
8. Use hazard flashers in tractor when transporting.
9. Install safety chain when attaching to tractor.
10. Review safety instructions with all operators annually.

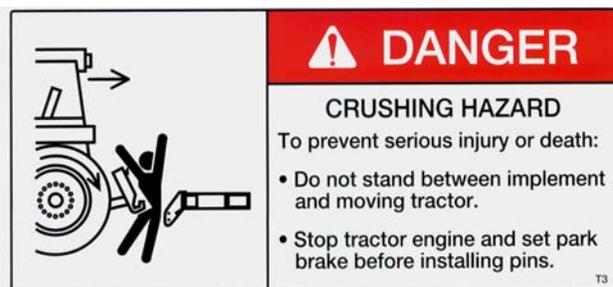
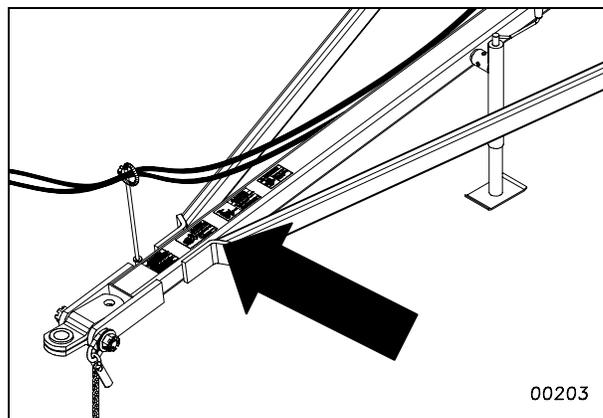
K-1



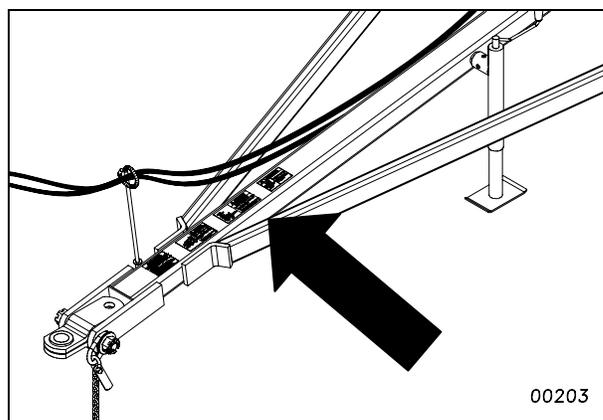
Caution  
838-598C  
Quantity 1



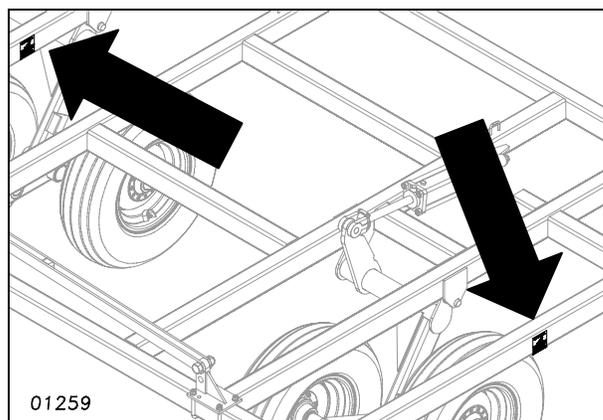
Danger Electrocution Hazard  
838-599C  
Quantity 1

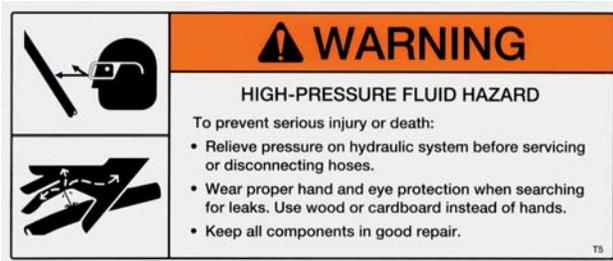


Danger Crushing Hazard  
838-600C  
Quantity 1

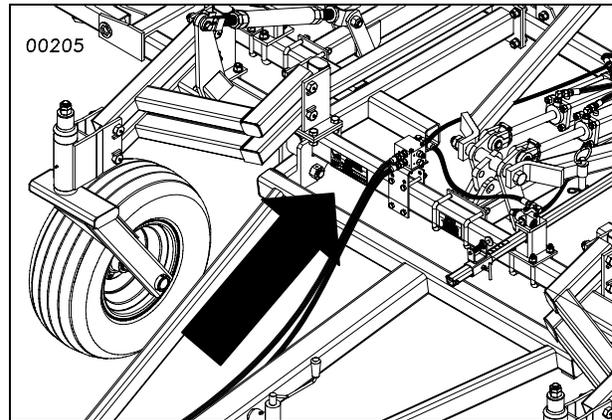


Warning Overhead Wing Hazard  
838-602C  
Quantity 4: 6318, 6320, 6323, 6325 & 6328

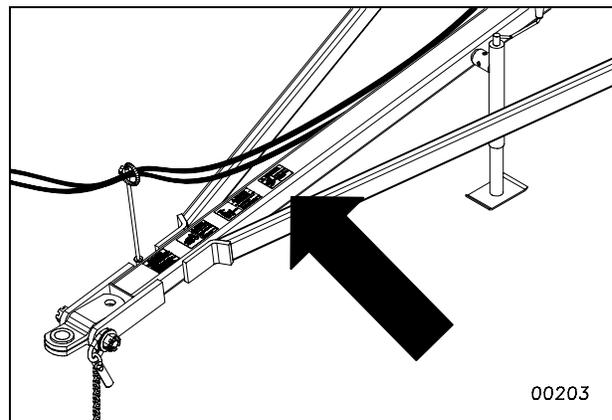




Warning High Pressure Fluid Hazard  
838-610C  
Quantity 1

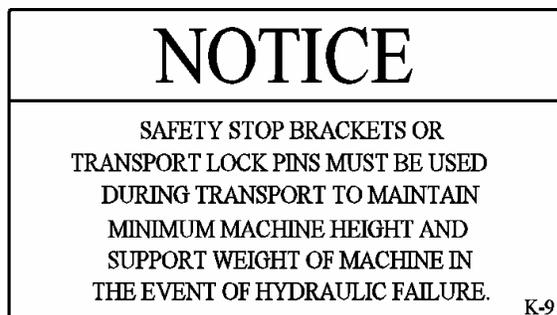
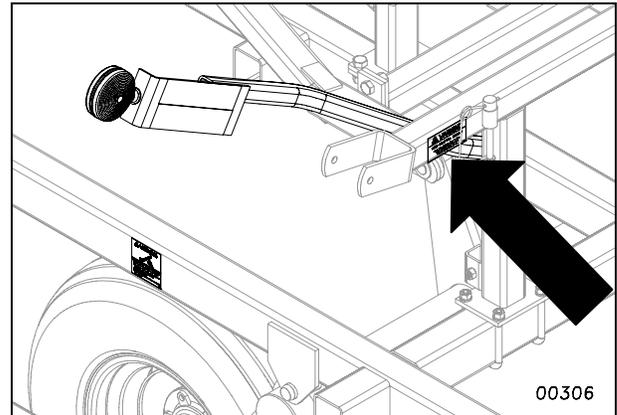


Warning Crushing Hazard  
838-611C  
Quantity 1

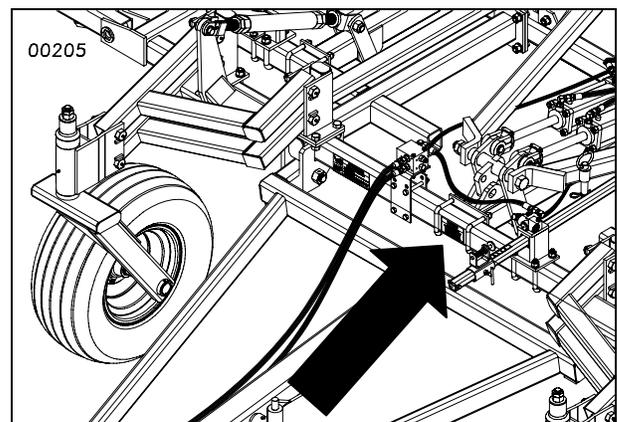




Warning Wing Falling Hazard  
838-612C  
Quantity 2: 6318, 6320, 6323, 6325 & 6328



Notice  
838-613C  
Quantity 1





## Introduction

Great Plains welcomes you to its growing family of new product owners. This implement has been designed with care and built by skilled workers using quality materials. Proper assembly, maintenance and safe operation will help you get years of satisfactory machine use from your machine. To ease the assembly task and produce a properly working machine, read this entire manual before assembling or setting up new equipment.

### Description of Unit

The Series VII 6113, 6116, 6318, 6320, 6323, 6325 & 6328 Field Cultivator is a 1 or 3-section seedbed preparation tillage tool. Working width is 13' 7" to 27' 9". The implement is designed for secondary field operations to smooth, level, eliminate weeds and incorporate chemicals. Various finishing attachments are available to further smooth, redistribute residue, firm soil and break clods.

### Using This Manual

This manual will familiarize you with safety, assembly, operation, adjustment, troubleshooting and maintenance. Read this manual and follow the recommendations to help ensure safe and efficient operation.

The information in this manual is current at printing. Some parts may change to assure top performance.

#### Definitions

The following terms are used throughout this manual.

Right and left as used in this manual are determined by facing the direction the machine will travel while in use unless otherwise stated.

**IMPORTANT:** A crucial point of information about the preceding topic. For safe and correct operation, read and follow the directions provided before continuing.

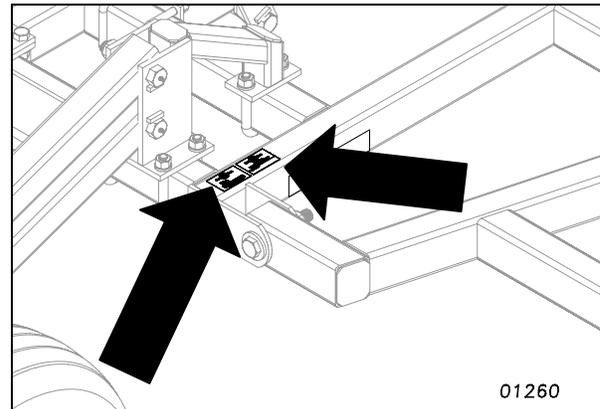
**NOTE:** Useful information about the preceding topic.

### Owner Assistance

If customer service or repairs are needed, contact your Great Plains dealer. They have trained

personnel, parts and service equipment specially designed for Great Plains products.

Your machine's parts should only be replaced with Great Plains parts. Always use the serial and model number when ordering parts from your Great Plains dealer. The serial-number and patent plate (if provided) are located on the center section of the implement on the front frame tube as shown in Figure A.



**Figure A**  
**Serial Number & Patent Plate**

Record your implement model and serial numbers here for quick reference.

Model Number: \_\_\_\_\_

Serial Number: \_\_\_\_\_

Your Great Plains dealer wants you to be satisfied with your new machine. If you do not understand any part of this manual or are not satisfied with the service received, please take the following actions:

1. Discuss the matter with your dealer's service manager. Make sure they are aware of any problems so they can assist you.
2. If you are still not satisfied, seek out the dealership owner or general manager.
3. For further assistance, write to:

#### Product Support

Great Plains Mfg. Inc. Service Department

PO Box 5060

Salina, KS 67402-5060

gp\_web\_cs@greatplainsmfg.com

(800)-255-9215

## Assembly and Setup Assistance

To order additional copies of operator's and parts manuals, write to the following address. Include model numbers in all correspondence.

If you do not understand any part of this manual or have other assembly or setup questions, assistance is available. Contact

### Product Support

**Great Plains Mfg. Inc., Service Department**

PO Box 5060

Salina, KS 67402-5060

## Pre-Assembly Checklist

- Before assembling, read and understand "Important Safety Information," beginning on page 1.
- Have at least two people on hand while assembling.
- Make sure assembly area is level and free of obstructions (preferably an open concrete area).
- Have all major components.
- Have all fasteners and pins shipped with Series VII Field Cultivator.
- **IMPORTANT:** If a pre-assembled part or fastener is temporarily removed, remember where it goes. Keep the parts separated.
- Have a copy of the parts manual on hand. If unsure of proper placement or use of any part or fastener, refer to the parts manual.
- Check that all working parts are moving freely, bolts are tight, and cotter pins are spread.



## Assembly

This section covers the proper assembly of the implement. The reference numbers on the figures give you an indication of the order of assembly. For a complete breakdown of any part not shown in this assembly section, refer to the parts manual for proper location. Refer to the Appendix for proper bolt torque values.

### Center Torque Tube & Walking Beam Assembly

After uncrating the machine, place the center frame (1) Figure 1, in the center of your work area on stands. Pin the torque tube (2) to the center frame with the 1 1/4 x 6 pins (3) and 1 1/4 x 7 pin (4), secure them with the 3/8 x 2 1/4 Gr. 8 hex bolts (5) & top lock nuts.

Slide the pivot spindle of the walking beam assembly (6) into the sleeve at the end of the torque tube wheel arm. It is a good idea to put some form of anti-seize on the spindle before you insert it. Line up the hole in the

spindle with the hole in the sleeve and secure with 5/16 x 3 clevis pin (7) with 5/32 x 1 1/2 cotter pin.

When both walking beams have been installed, bolt on the 9.5L x 15, 8 ply tires (8) with the 1/2 x 1 1/4" lug bolts (9).

Bolt the 4 x 4 K-Flex Stubs (10) onto the center frame with two 1/2 x 5 1/2 hex bolts (11) with lock washers and hex nuts. See Section 4 for placement dimension.

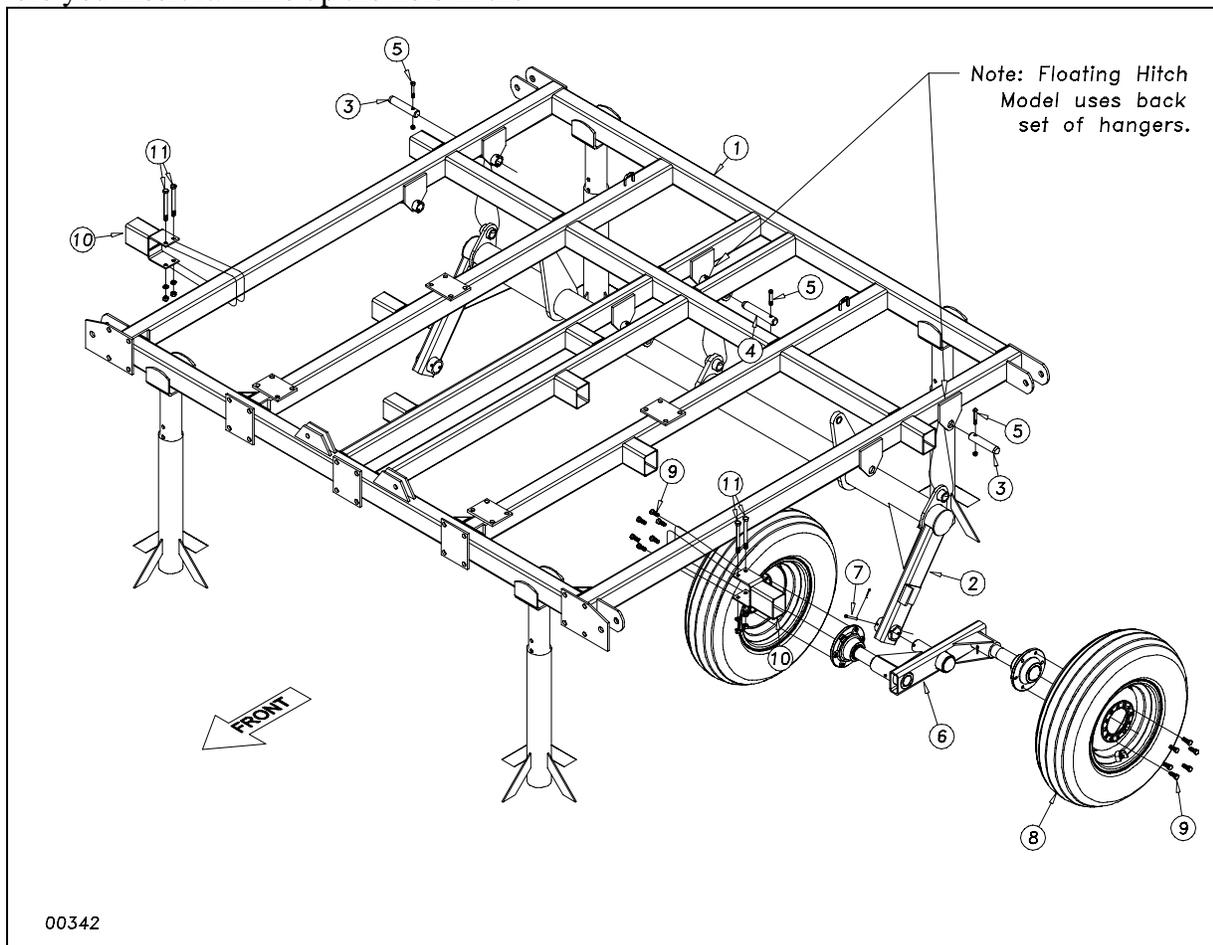


Figure 1

## 6113 & 6116 Wing Frame Assembly

Bolt the wing frame (1), Figure 2, to the center frame with two 1 x 6 hex bolts (2) with nylon lock nuts. Install the 5/8 x 3 x 5 1/2 u-bolts (3) to secure the wing frame rigid. Use lock washers and hex nuts. On model

6116, bolt the 11" bolt on stub (4) and the 5" bolt on stub (5) to the wing frame using 5/8 x 1 1/2 hex bolts (6), using lock washers and hex nuts.

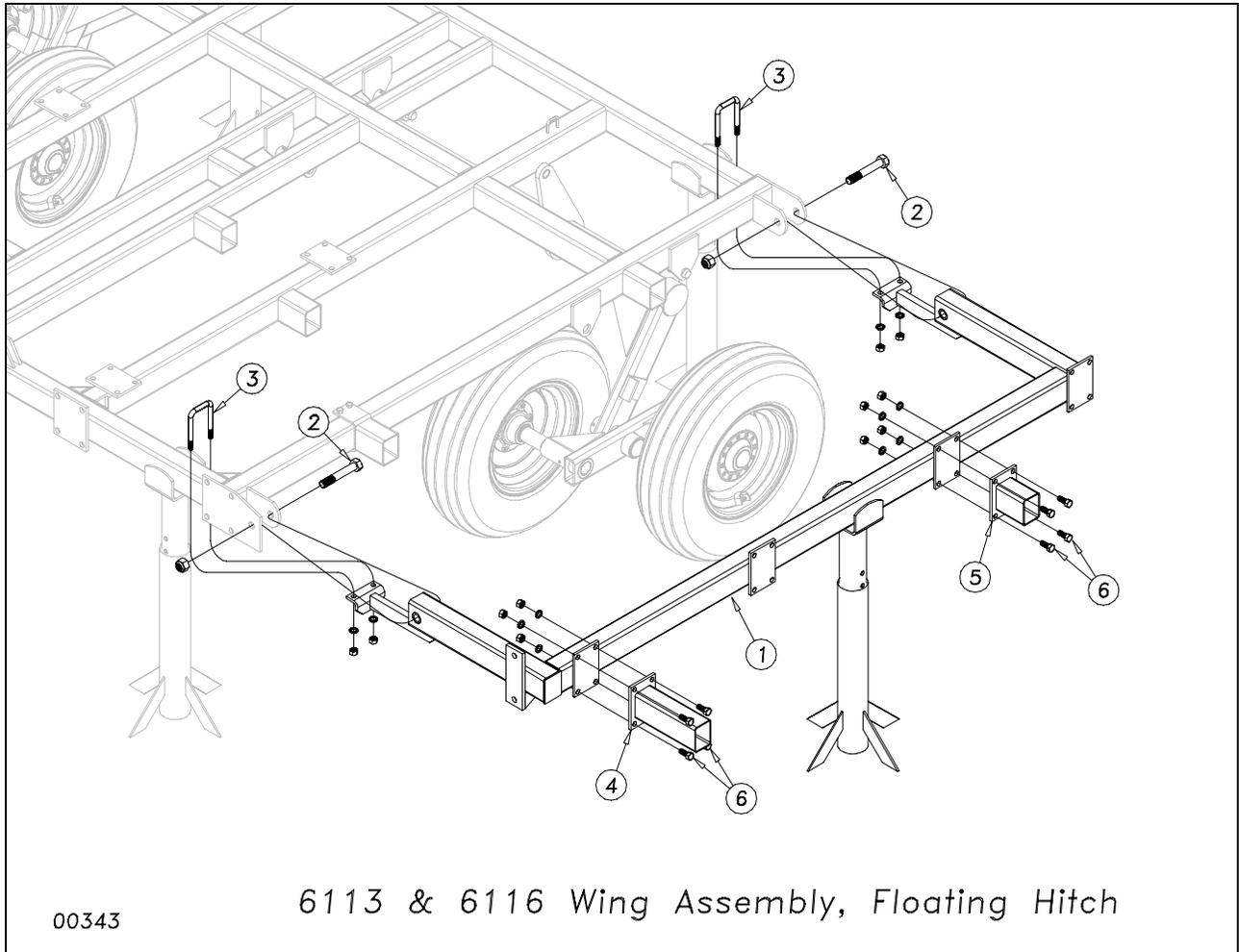


Figure 2

## 6318–6328 Inside Wing and Wheel Arm Assembly

Bolt the inside wing frames (1) Figure 3, to the center frame with two 1 x 6 hex bolts (2) with nylon lock nuts (3). Draw the nuts down tight but ***do not torque***.

Once the wings are attached, insert the wheel arm bracket (4) into the wing frame hangers and secure it just as you did on the center with 1 1/4 x 6 pins (5). Secure the 1 1/4 x 6 pins with the 3/8 x 2 1/4 Gr. 8 hex bolts (6) & top lock nuts.

Install the wing walking beam assembly (7) as shown in Figure 3 with the long 14"

spindle toward the front. On models 6318 & 6320, install 14" hub & spindle assembly (11) as shown in insert. Use anti-seize material on spindle. Secure the spindle in the sleeve with the 5/16 x 3 clevis pin (8) and 1/8 x 1 cotter.

Bolt the 9.5L x 15, 8-ply tire(s) (9) in place with the 1/2 x 1 1/4 lug bolts (10). On models 6320 & 6325, bolt the 11" bolt on stub (12) and the 5" bolt on stub (13) to the wing frame using 5/8 x 1 1/2 hex bolts (14), using lock washers and hex nuts

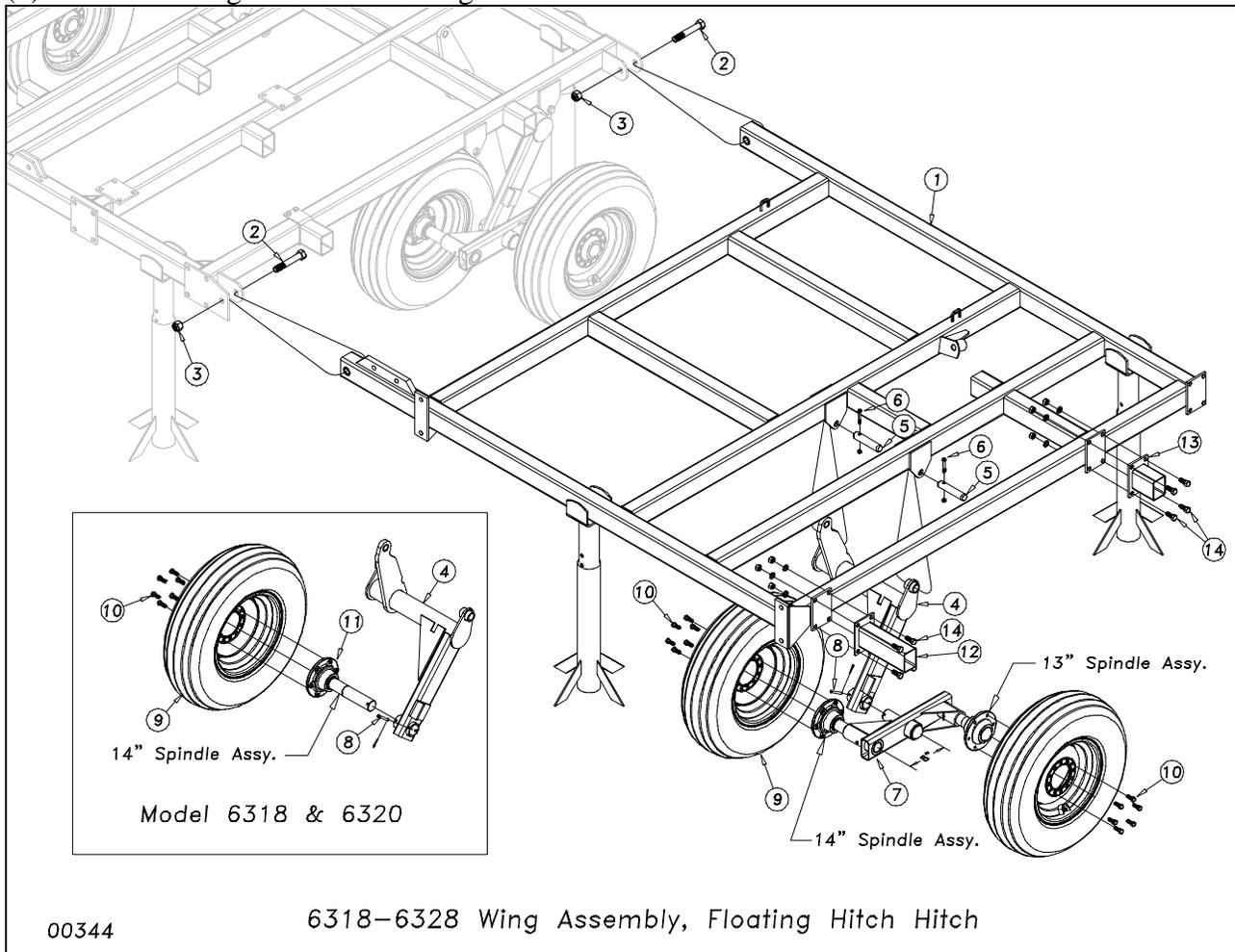


Figure 3

## Brace Bar and Wing Brace Assembly

Install the 1 x 7 1/2 eye bolt (1) Figure 4, in the mounting bracket at the back of the wing with a 1" jam nut on each side of the bracket. Install the rephasing wing cylinder (2) between the eyebolt and the lever on the wheel bracket (see parts manual for cylinder size). Secure the cylinder with 1" clevis pins, 1" machine washers and 3/16 x 2 cotter pins.

Bolt the center brace bar (3) to the front of the center frame with 3/4 x 2 hex bolts (4) with lock washers and hex nuts. **Do not** tighten bolts. Bolt the wing brace (5) to the front of the

wing with 3/4 x 2 hex bolts (4) with lock washers and hex nuts. Use a 1 x 6 hex bolt (6) and nylon lock nut in the hinge. Draw nut tight but **do not torque**. Insert the cylinder mounting tube (7) between the center frame and the brace bar. Attach with 5/8 x 4 x 4 1/2 u-bolts (10) and 3/4 x 2 hex bolts (11), lock washers and nuts. Insert the leveling link tubes (8 & 9) and attach with u-bolts (10) as before. Tightening all u-bolts and brace bar bolts evenly to prevent binding at hinge.

## Wing Fold Bracket Assembly

On models 6318-6328, bolt the rocker bracket (12), Figure 4, to the front bar of the wing using two 3/4 x 3 hex bolts (13) with lock washers and hex nuts. On model 6328, attach the connecting link (14) to the rocker bracket (12) with 1 x 3 hex bolts (15) and 1" lock nuts.

U-bolt the tie strap bracket (16) to the wing frame using two 1/2 x 3 x 5 u-bolts (17) with lock washer and hex nuts. Bolt the 7" offset stub (18) to the wing frame as shown with two 5/8 x 4 x 4 1/4 u-bolts (19) with lock washers and hex nuts.

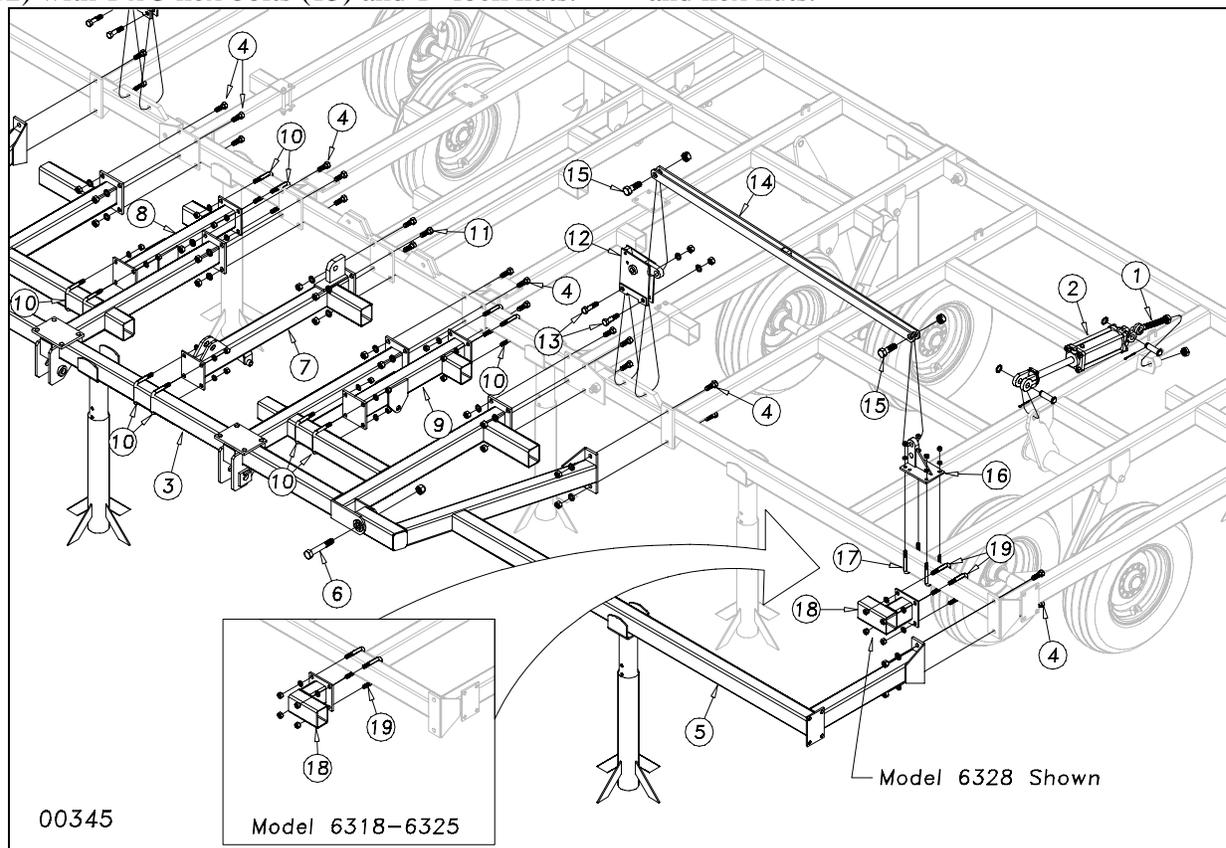


Figure 4

## Level Bar Assembly

Slide the H-bracket (1) down over the cylinder mount tube as shown in Figure 5. Bolt in place with a 3/4 x 6 bolt (2) and lock nut. Draw this nut up but **do not torque**, as this part must pivot.

Connect the level bar (3) to the torque tube using two 1 x 3 3/8 usable headed pins (4), 1" flat washers, 1" machine washers and 3/16 x 2 cotter pins. Install the 1 x 9 Gr. 8 bolt (5) through the level bars and H-bracket. Draw up snug with a 1" lock nut (**do not torque**).

Slide the leveling links (6) over the leveling link mounting tubes as shown. Bolt in place with 1 x 6 special thread hex bolts Gr. 8 (7), securing with nylon lock nuts. **Do not**

**torque**, as this part must pivot freely. Connect the caster wheel level bars (8) to the level bar (3) using two 1 x 4 1/2 usable headed pins (9), 1" machine washers and 3/16 x 2 cotter pins.

Bolt the caster wheel level bar (8) to the turnbuckle assembly (10) through the leveling link (6) as shown. Use the 1 x 6 special thread hex bolt (7) and nylon lock nut. **Do not torque** as before.

Attach the rebound valve mounting bracket (11) and valve mounting bracket plate (12) with four 1/2 x 4 1/2 bolts (13) using lock washers and hex nuts. Insert the 3/4 x 3 transport pin w/keeper (14) in holder.

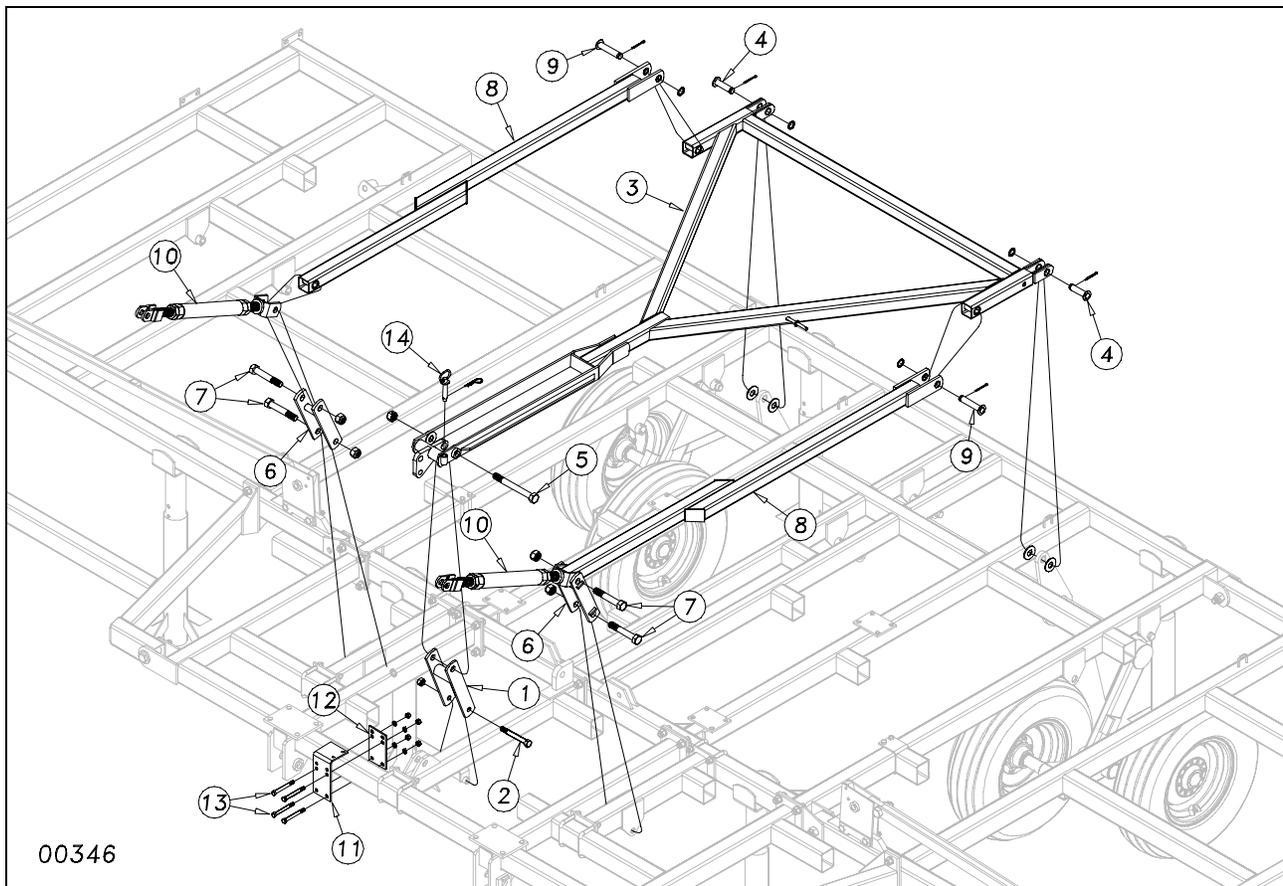


Figure 5

## Caster Wheel Linkage & Hitch Pole Assembly

Bolt the center fold bracket (1) to the center frame as shown in Figure 6. Use 3/4 x 2 1/2 hex bolts (2) with lock washers & hex nuts. Bolt the center frame truss (3) to the center frame using 5/8 x 1 1/2 hex bolts (4), lock washers and hex nuts, and 3/4 x 2 hex bolts (5) with lock washers and hex nuts.

U-bolt the gauge wheel arm mount (6) to the center brace bar with three 3/4 x 3 x 5 1/2 u-bolts (7). Insert the left & right bottom center gauge wheel arms (8 & 9) and secure with 1 x 5 1/2 special hex bolts (11) and nylon lock nuts, **do not torque.**

Attach the top gauge wheel arms (10) with the same 1 x 5 1/2 special hex bolt and

nylon lock nut, **do not torque.** Connect the turnbuckle to the bottom arms with a 1 x 2 3/4 clevis pin (12), machine washer and 3/16 x 2 cotter pin. See Caster Wheel Assembly, Section 3, Transport in parts manual, for caster wheel exploded diagram.

Bolt the hitch pole (13) to the brace bar with two 1 1/4 x 7 Gr. 8 hex bolts (14), secure with 1 1/4 lock nuts but **do not torque.** Insert the tongue jack (15) on the hitch pole jack tube. Bolt the hitch clevis (16) to the hitch pole with 1 1/2 x 11 safety chain bolt (17), machine washers, slotted hex nut and 1/4 x 3 cotter pin. Attach hose holder (18) with 1/8 x 1 1/2 cotter pin.

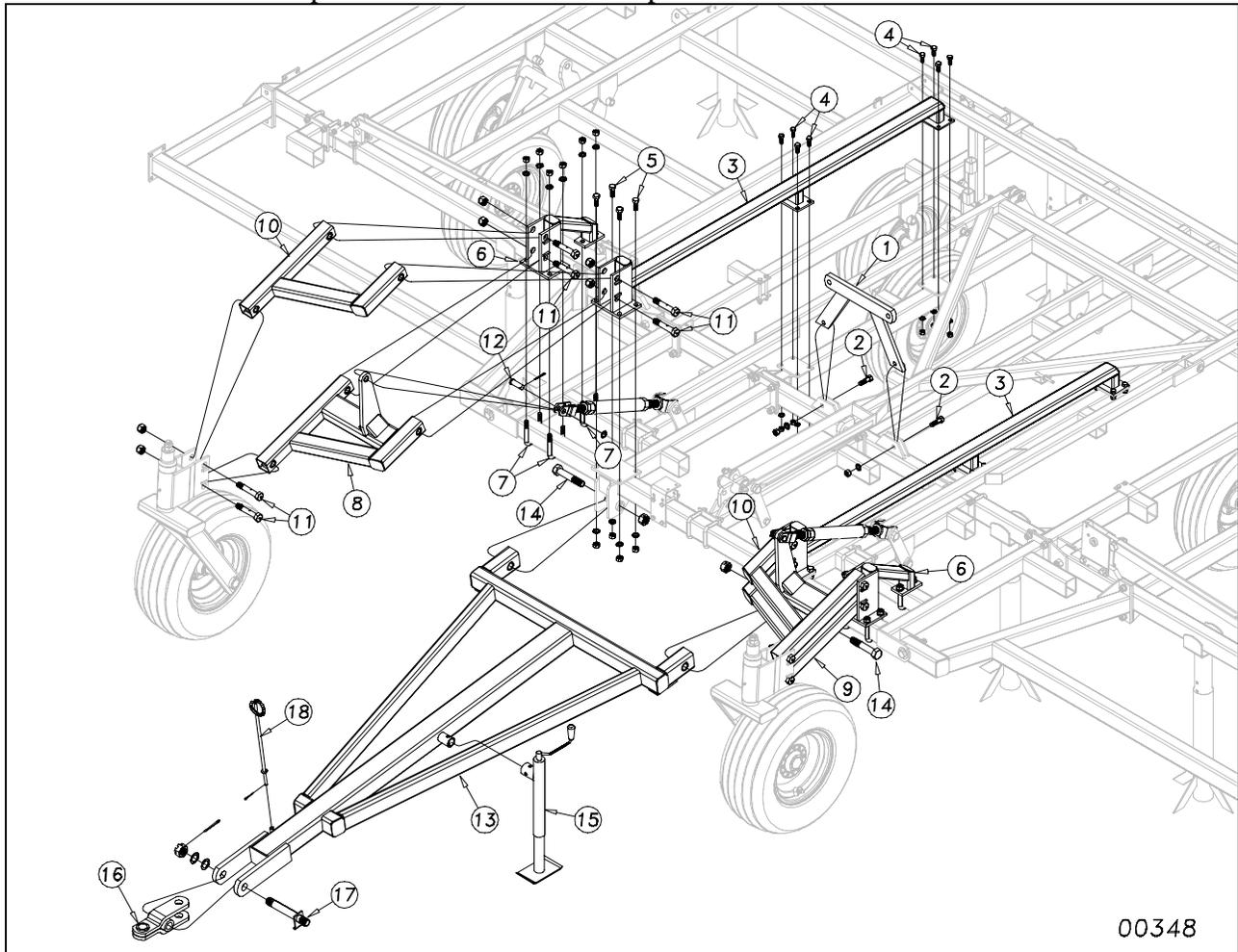


Figure 6

## Center Lift Cylinder, Rest Pads and Hydraulic Valves Assembly

Connect the master lift cylinder (1) to the center frame as in Figure 7. Connect the rod end to the lug on the Level Bar with the 1 x 9, Gr.8 hex bolt (3) and lock nut. Place a 1" flat washer on each side of the lug to keep the hardened bushings from coming out.

Secure the base of the cylinder with 1 x 3 1/2" clevis pin (2), 1" machine washer and 3/16 x 2 cotter pin. Mount the rebound valve (4) as shown with the V1 port to the front and top using two 5/16 x 4 hex bolts (5) with lock washers and hex nuts.

Install the depth stop mounting bracket (6) to the center brace bar using two 5/8 x 3 x

5 1/2 u-bolts (7), lock washers and hex nuts. Bolt the depth stop valve (8) on top of the bracket using the 5/16 x 2 hex bolts (9) with lock washers. Insert the depth stop tube (10) into the mounting bracket (6) and attach to the level bar with 1/2 flat washer and 1/8 x 1 cotter pin. Slide depth stop control assembly (11) onto depth stop tube and insert a 3/8 x 2 hex bolt (12) with 3/8 lock nut to capture the assembly.

U-bolt the 3" cylinder rest pads (14) on the center bar as shown, using a 1/2 x 3 x 5 u-bolt (13) with lock washers and hex nuts (see shank layout drawing for exact placement).

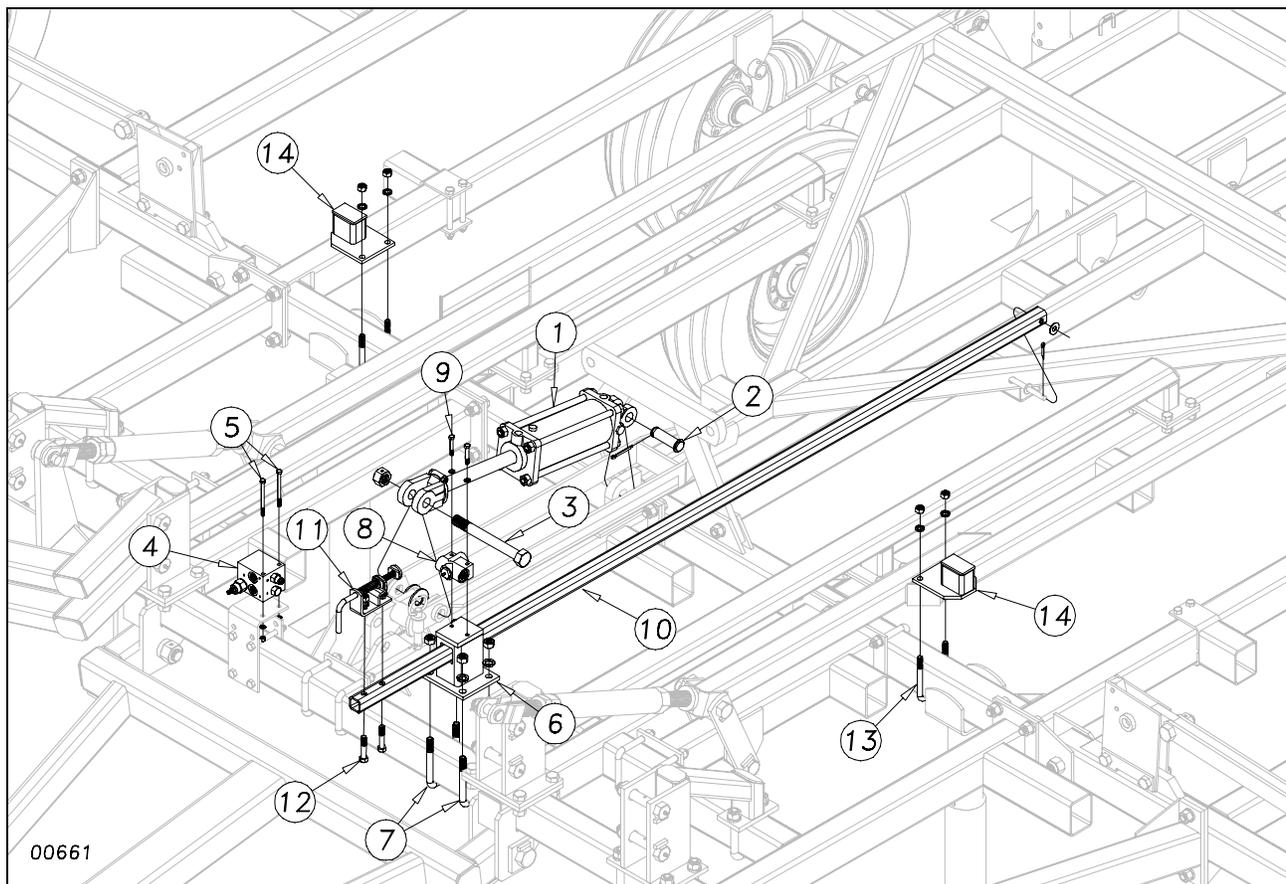


Figure 7

## Fold Cylinders and Rocker Arm Assembly

Connect the center fold cylinders (1) to the center fold bracket as shown in Figure 8. Use the 1" x 3 1/2 clevis pin (2) with 1" machine washer and 3/16 x 2 cotter pin. Attach the rocker (3) to rocker bracket with 1 x 3 3/8 usable Clevis Pin (4) using 1" machine washer and 3/16 x 2 cotter. **Do Not Connect Rod End Of Cylinders To Rockers Before They Are Charged With Oil.**

Place a support block of wood under the cylinders, as shown, so they clear the rockers in the extended position. You are now ready to connect the hydraulic hoses to the cylinders and charge the fold system (see hydraulic layout, section 2).

Once the fold cylinders are fully charged and free of air, connect them to the rockers.

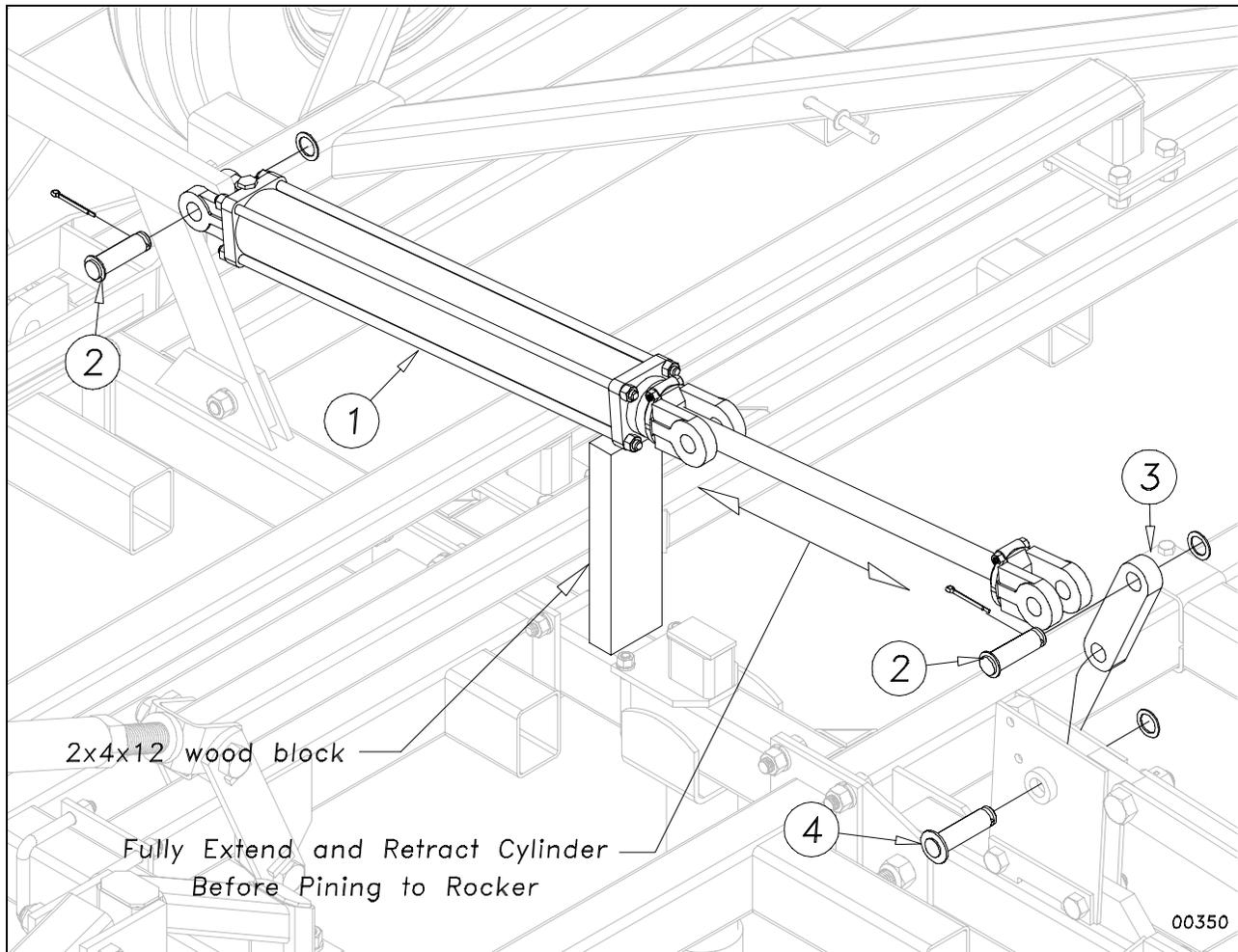


Figure 8

## Center Wing Stop Assembly

U-bolt the center wing stop (1) to the second bar from the rear on the center frame as shown in Figure 9. Use 1/2 x 3 x 5 u-bolts (2) with lock washers and hex nuts. Center the

wing stop from side to side. Insert the 1/2 x 4 1/2 transport lock quick pins (3) in the holders on the wing stop..

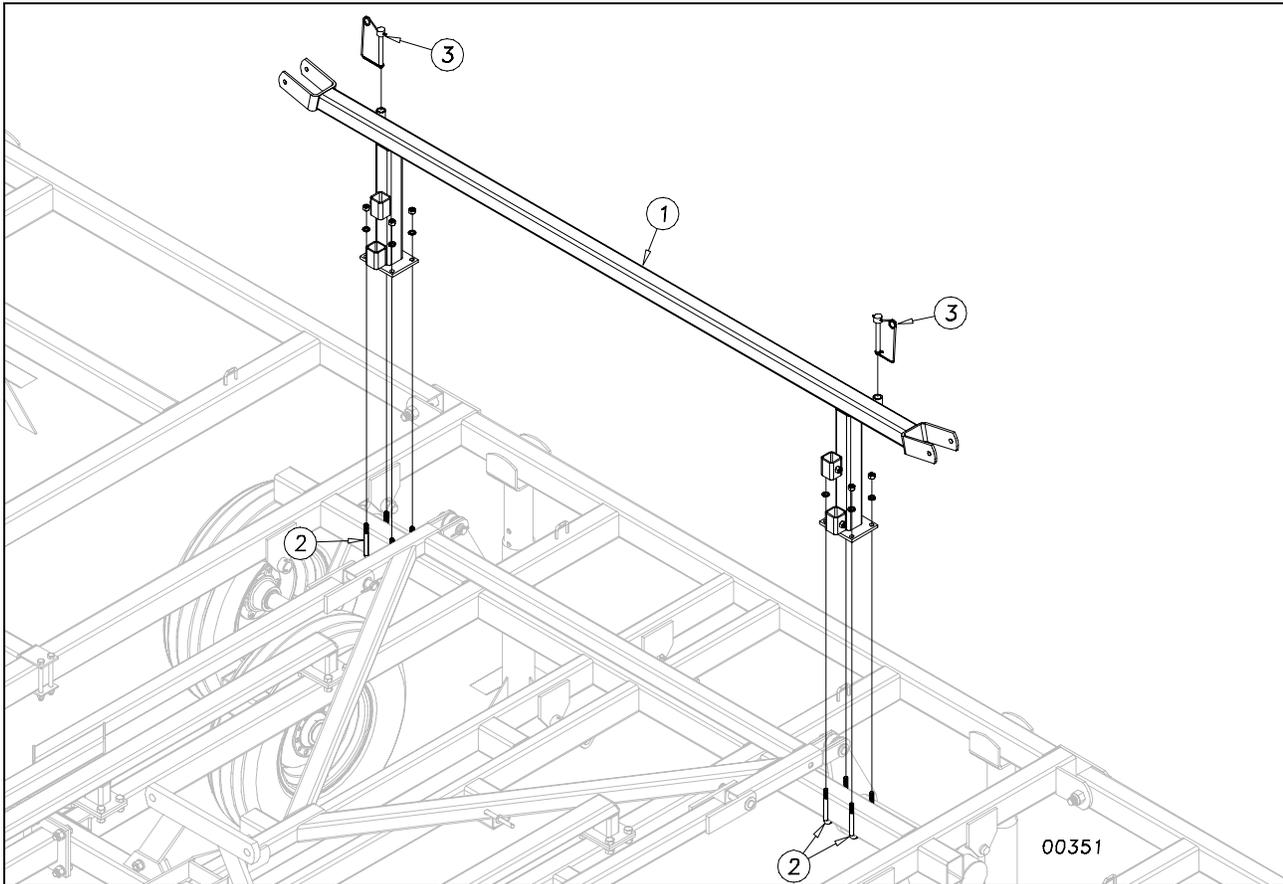


Figure 9

## Completing Setup

Install the plastic end caps into the open ends of all the 4x3 frame tubes

You should now be ready to add shanks to the machine and then if the machine has a finishing attachment you would install it following the shanks. See the shank layout section 3 for proper shank locations for your unit. Section 5 of the parts manual shows the individual shank assemblies and parts for both the K-flex and magnum shanks.

Once the shanks are installed and all of the hydraulic procedures have been completed, you may fold the machine to check for clearance and proper shank placement. Slowly fold the machine while watching that hoses do not become pinched or kinked and watch that shanks clear all obstructions.

Once the machine is folded completely, begin to unfold slowly. **Be Sure No One Is Under The Wings When You Unfold The Machine.** Once the machine is unfolded, add the safety decals and the product decals. Refer to the Important Safety Information (page 7) for the proper placement of safety decals.

Install the safety chain, SMV sign & safety lights in accordance with local and state laws. See parts manual for assembly drawings and parts list.

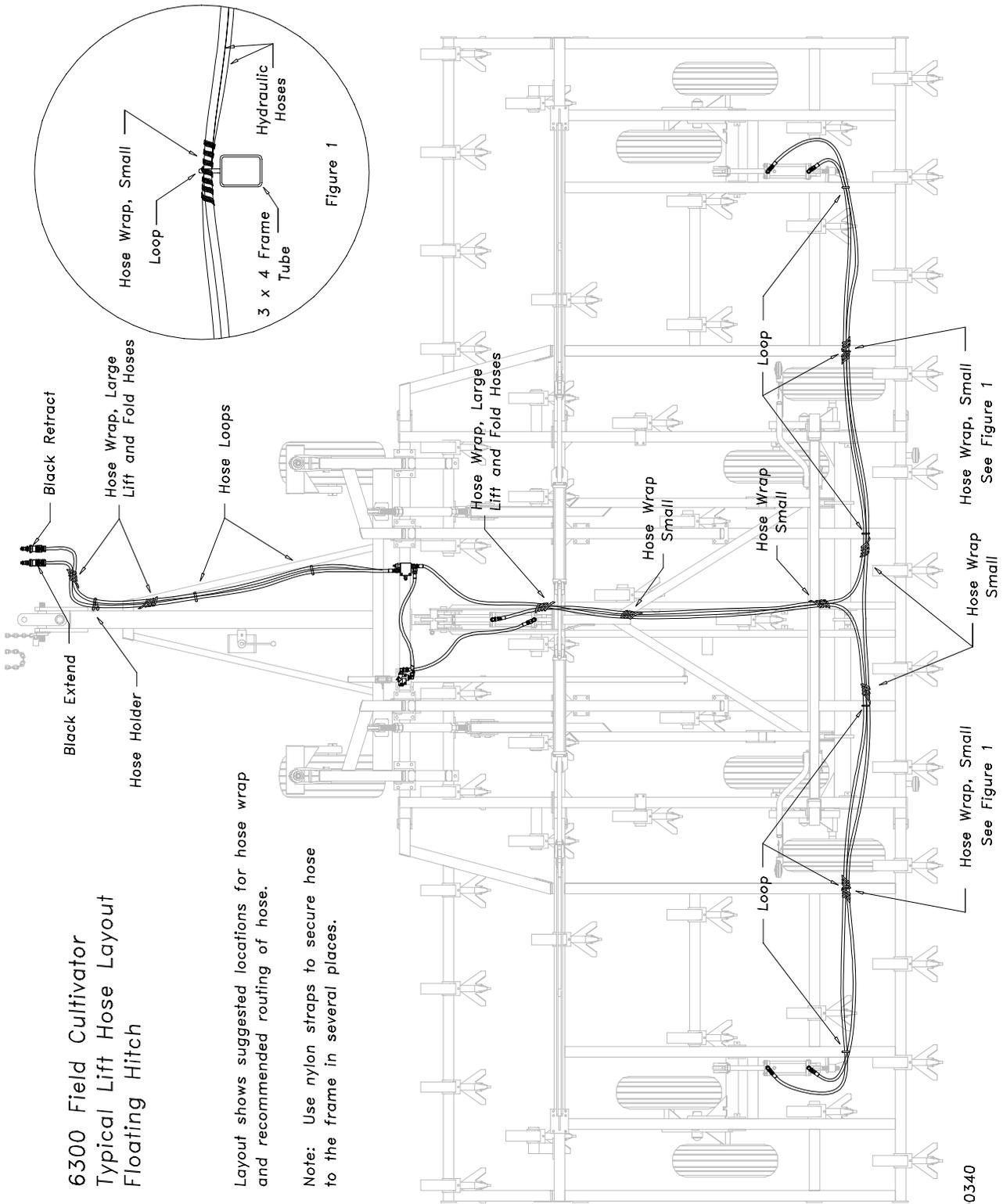
At this point, set up of the machine is complete and you are ready to add any finishing attachment, rear hitches, etc... to the machine. Be sure to consult the operating instructions, Section 4, for the first time field adjustments before going to the field for the first time.

# Typical Lift Hose Layout

## 6300 Field Cultivator Typical Lift Hose Layout Floating Hitch

Layout shows suggested locations for hose wrap and recommended routing of hose.

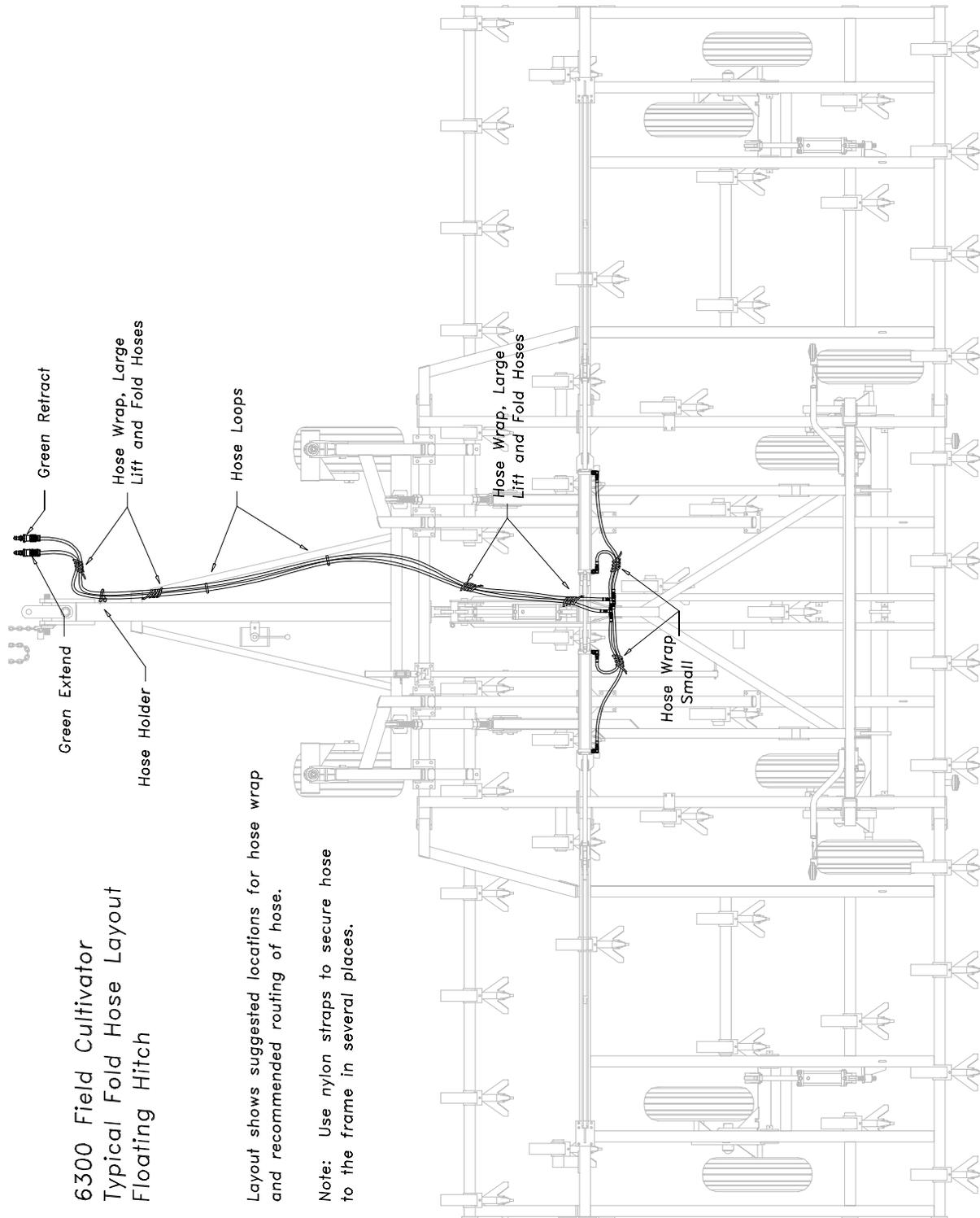
Note: Use nylon straps to secure hose to the frame in several places.



00340

00340

# Typical Fold Hose Layout



6300 Field Cultivator  
 Typical Fold Hose Layout  
 Floating Hitch

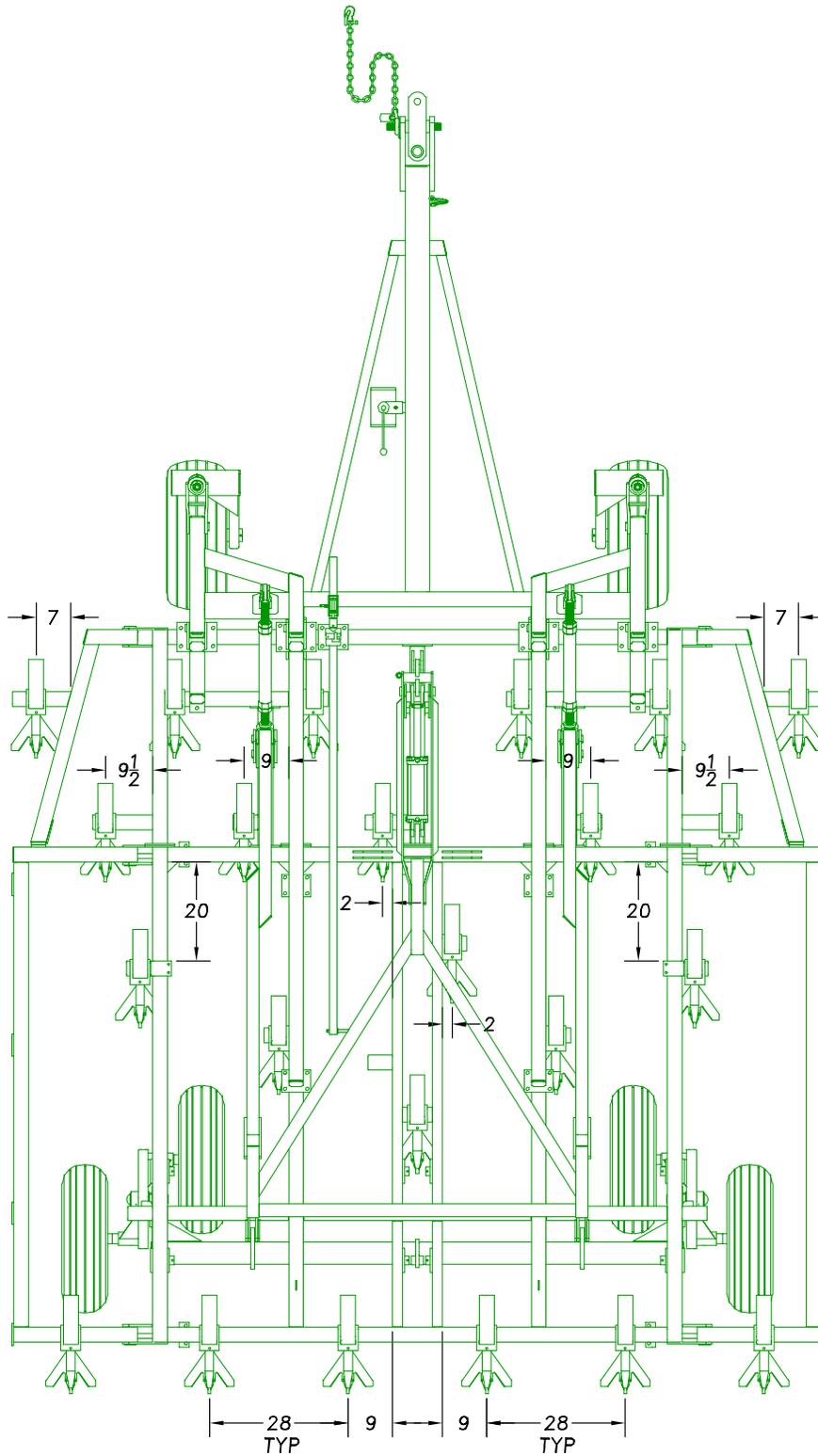
Layout shows suggested locations for hose wrap and recommended routing of hose.

Note: Use nylon straps to secure hose to the frame in several places.

00341

00341

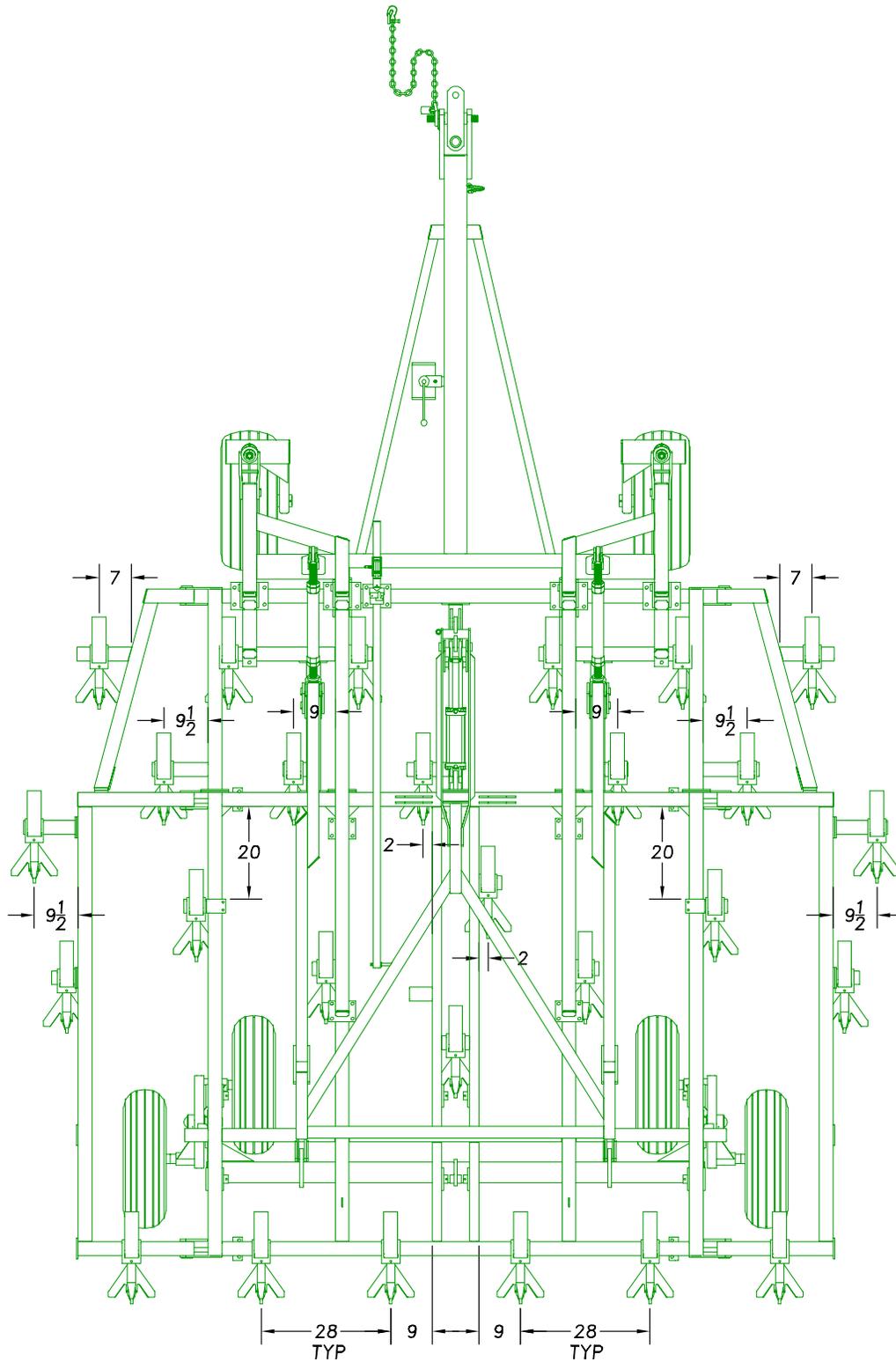
### 6113 Shank Layout, Floating Hitch



6113 Floating Hitch  
Shank Layout 7" K-Flex Shown

00333

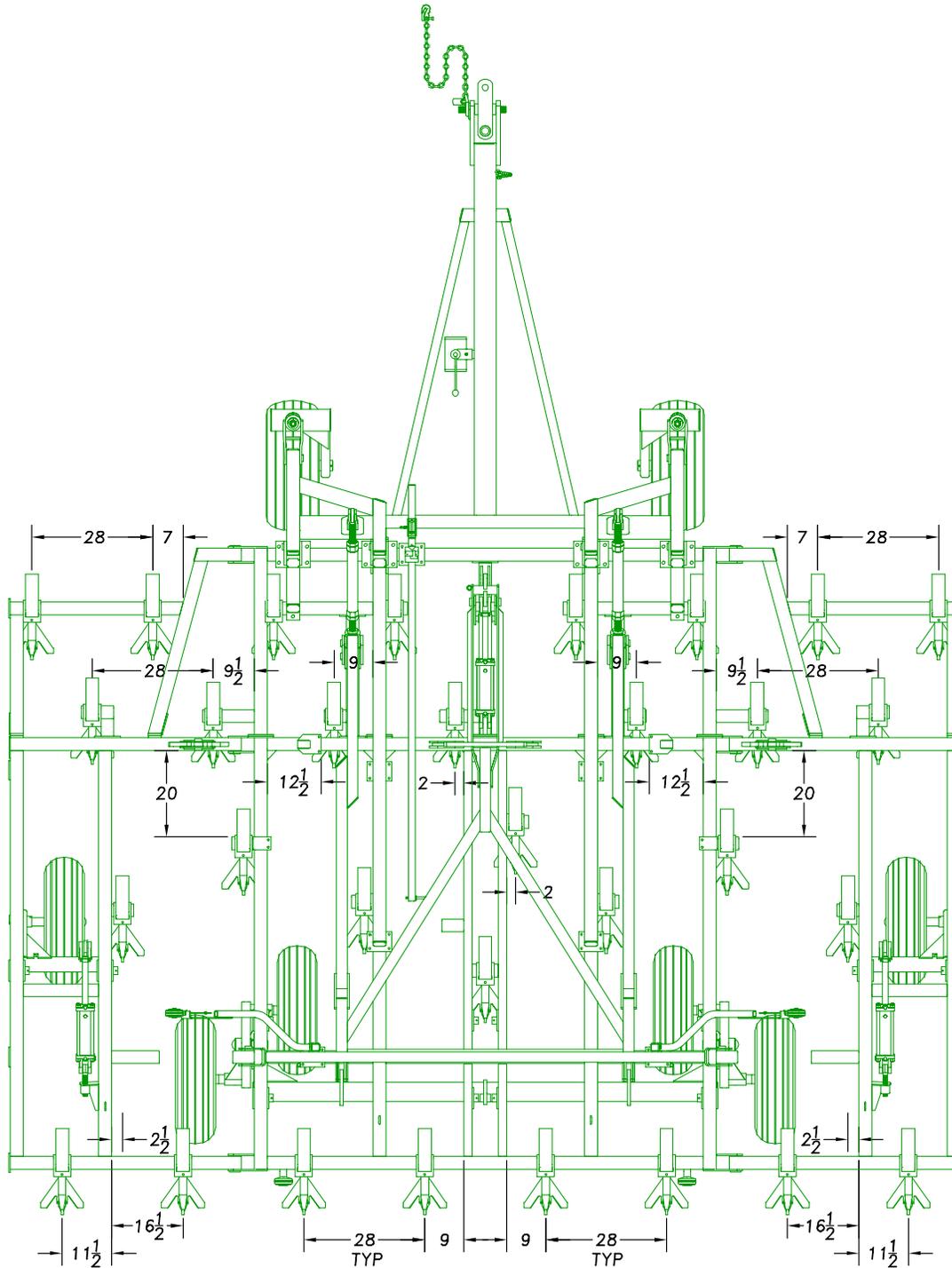
### 6116 Shank Layout, Floating Hitch



6116 Floating Hitch  
Shank Layout 7" K-Flex Shown

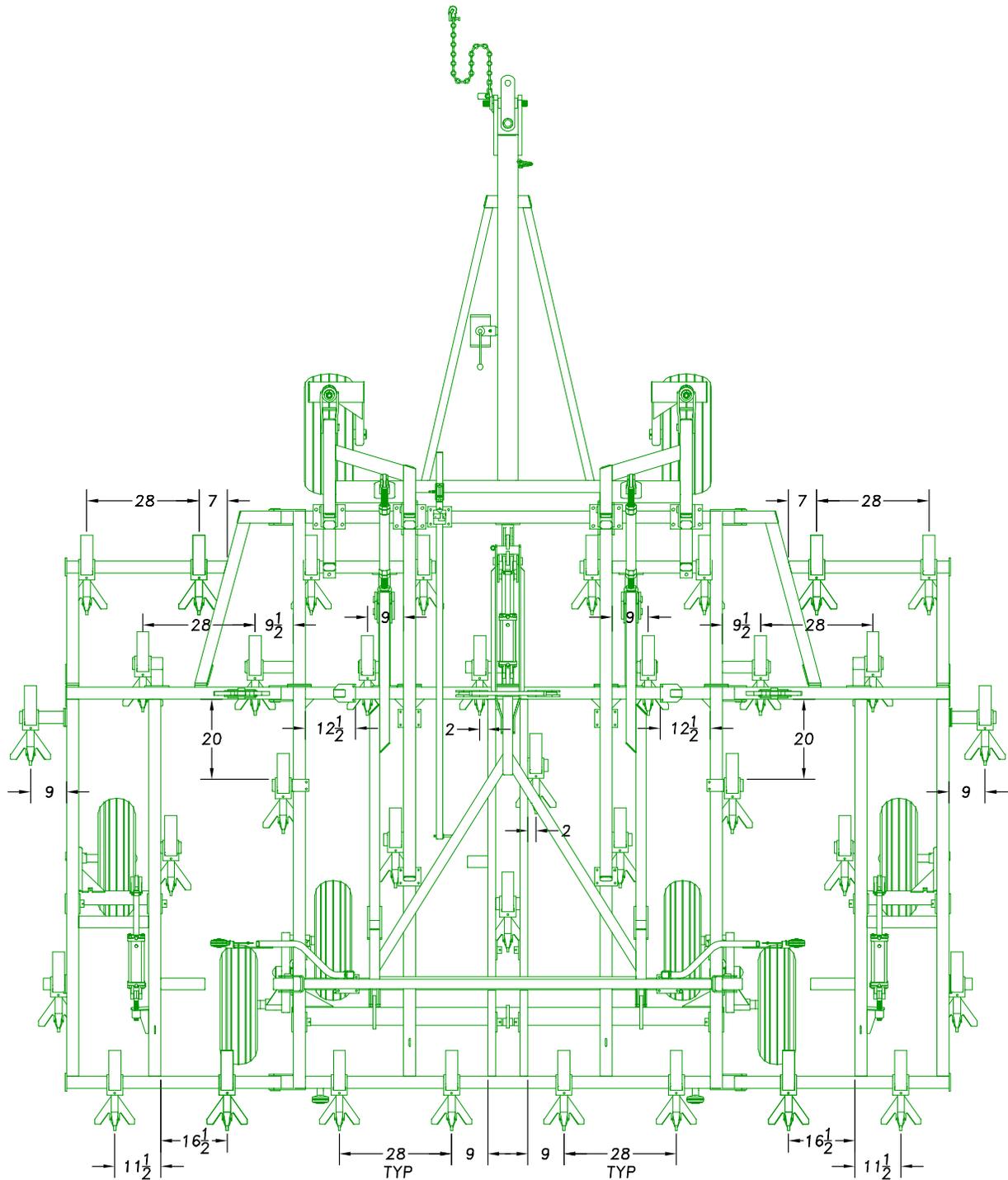
00334

### 6318 Shank Layout, Floating Hitch



6318 Floating Hitch  
Shank Layout 7" K-Flex Shown

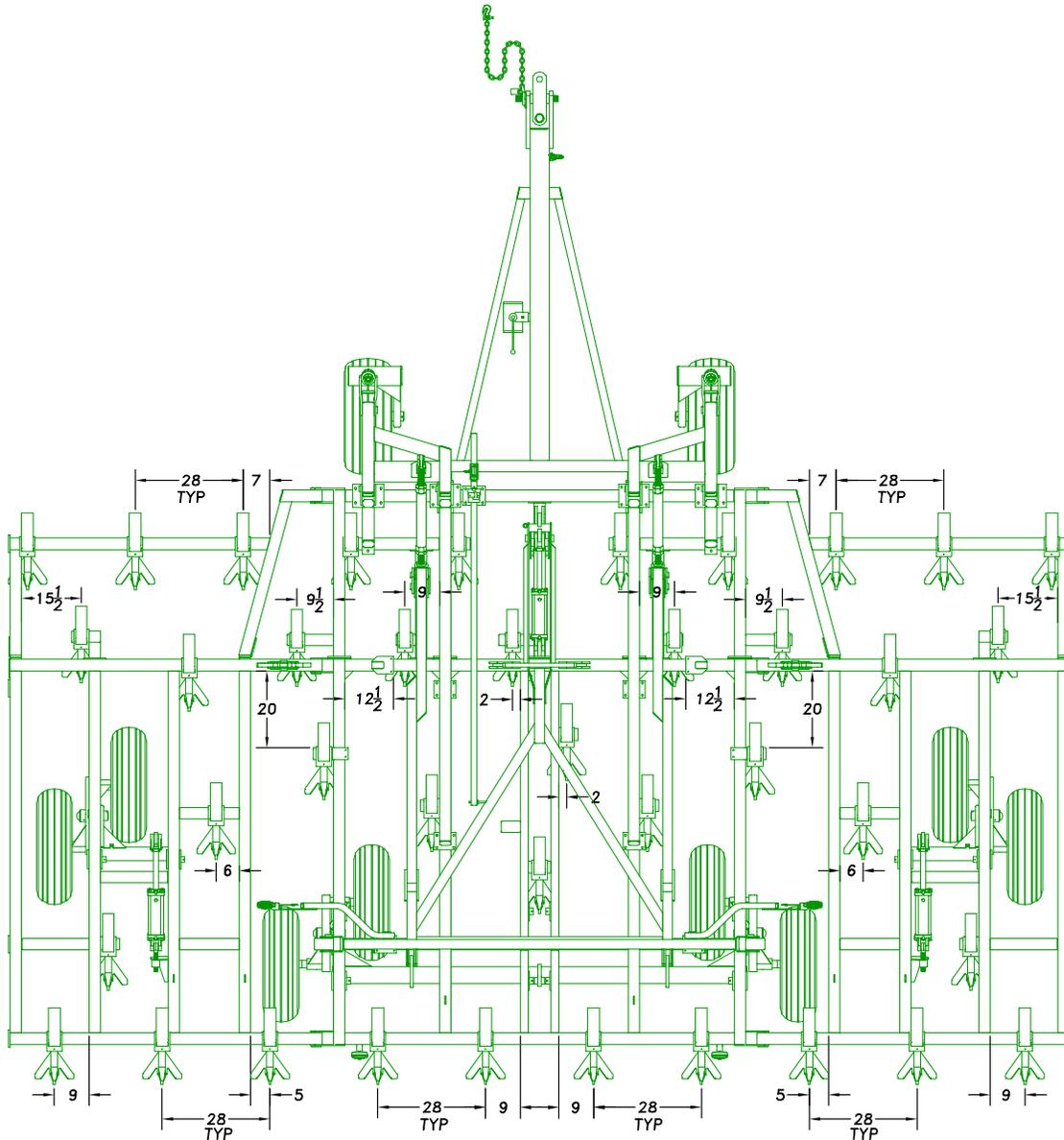
00335

**6320 Shank Layout, Floating Hitch**

6320 Floating Hitch  
Shank Layout 7" K-Flex Shown

00336

### 6323 Shank Layout, Floating Hitch



6323 Floating Hitch  
Shank Layout 7" K-Flex Shown

00337







## Operating and Maintenance

### Prior to Going to the Field

- Both dealer and customer read and thoroughly understand all safety recommendations. (These are found in the Safety Section of this operator manual.)
- Make sure your tractor horsepower matches the implement you are pulling. This is important so the implement can do the best possible job.
- Hitch the tractor to the Field Cultivator using the block or yoke clevis determined by the tractor drawbar. Use the correct size pin for clevis or block. **Raise any 3-pt arms and/or hitch attachments to its fully raised position to clear implement.**
- For TWO-WHEEL DRIVE and MFWD tractors, pin drawbar in fixed center position for field and transport. **For FOUR-WHEEL DRIVE and TRAC-DRIVE tractors, leave one hole clearance on each side of drawbar for field position, hitch damage may occur if pinned solid. Pin in center position for transport to maintain maximum steering control.**
- Clean all hydraulic couplings and connect to tractor. Each hydraulic coupling has a colored handle on it and is marked with a cylinder, either extending (black) or retracting (red).
- If machine is folded, remove the transport pins from the wing stops. (Do not remove pins if the wing is leaning against the pins or putting pressure on the pins. Use the hydraulics to pull the wings in completely before unpinning them.) Once the pins are removed, slowly unfold the unit. Make sure no one is under the wings during the unfolding process. Check again for hydraulic leaks and watch that hoses do not get pinched in hinges, wings stops, etc.
- After the machine is completely unfolded, raise and lower the Field Cultivator several times to purge air from the hydraulic system. Again check for hydraulic leaks and tighten or replace if necessary.

- Pre-leveling of machine can be done on a concrete slab or good level surface. Lower machine so sweeps are 1-2" off of ground on the center frame. Adjust the turnbuckles on the front caster wheels (Figure 1) to level it from front to back. (Shorten to bring front down, extend to bring front up.) Level machine with the front row shanks just slightly deeper or lower than the back.

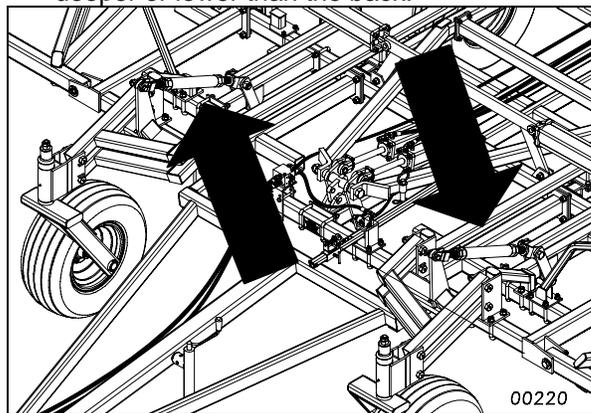


Figure 1

- Set the wings to match the depth of the center. This is done by adjusting the lift cylinder eyebolt on each wing (see Figure 2). Lengthen the bolt to run shallower, shorten the bolt to run deeper.

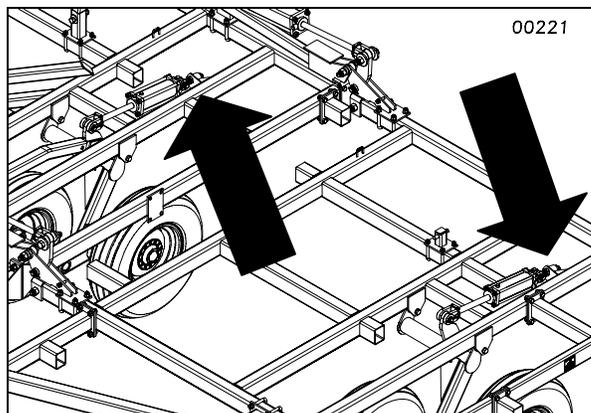


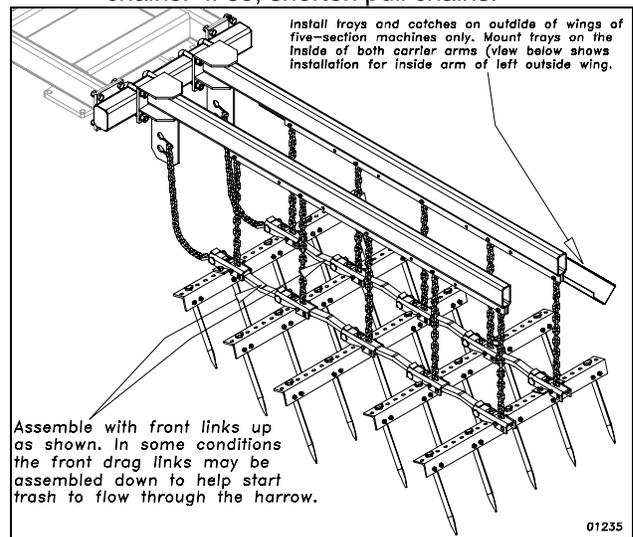
Figure 2

In some conditions the wings will need to be set slightly lower than the center as the center may tend to run deeper behind the tractor tires.

10. Check safety chain hookup. Make sure all warning lights are hooked up and functioning correctly.
11. Check the tire pressure for proper inflation and check the tightness of the lug bolts. Tire pressure amounts are located on the sidewall of each tire.
12. Check for any bolts that may need tightened or retightened. Grease all the hinge points. The hubs come pregreased and will not need more grease at this time.
13. Put transport lock in place and refold the machine slowly. Put wing stop pins in place. Always use the transport pins when moving from field to field. You are now ready to go to the field.

## General Operation Instructions and In-Field Adjustments

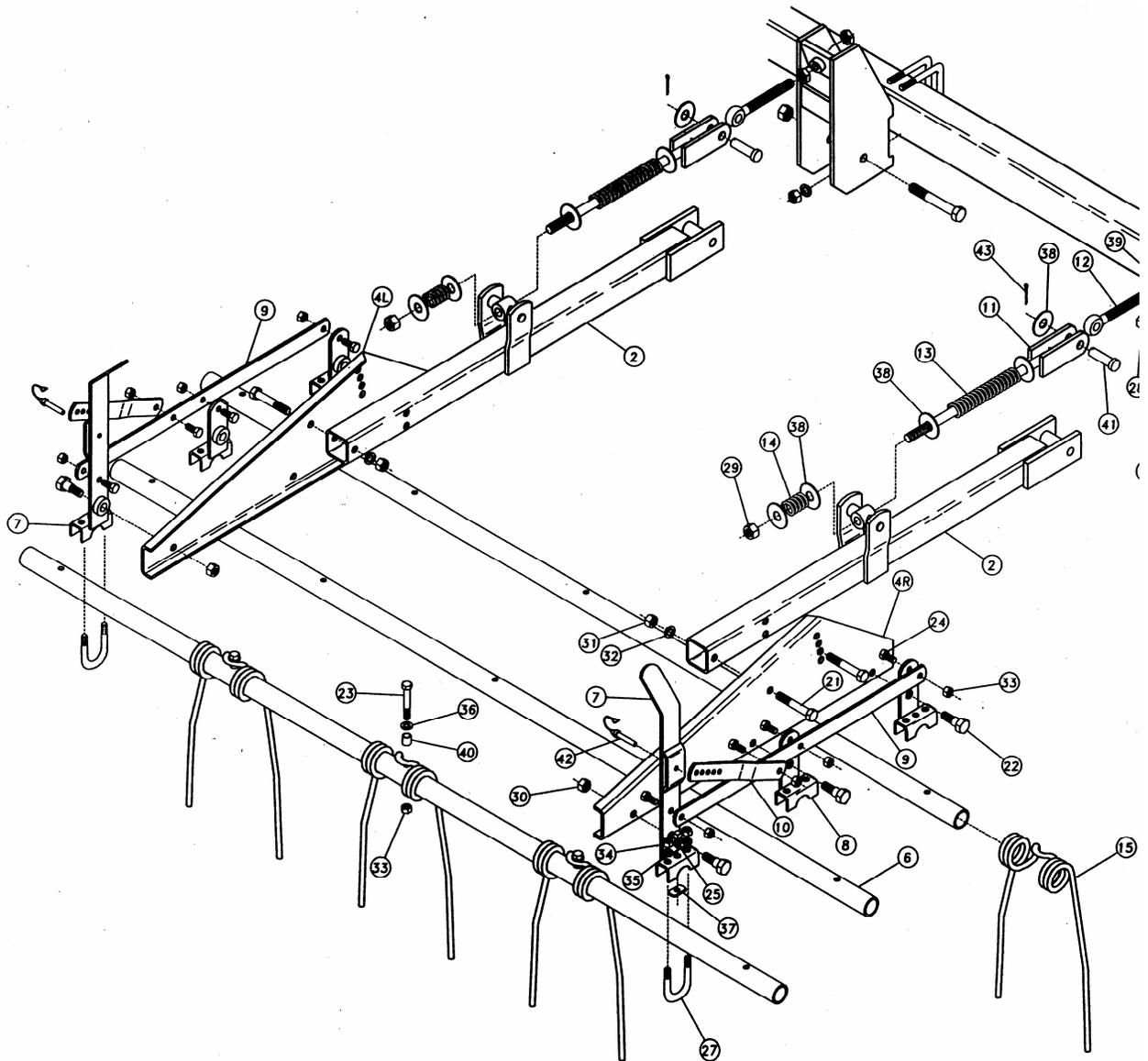
1. Remove the transport pins and unfold the machine. Make sure the fold cylinders are fully extended to allow the wings to fully flex in the field.
2. If possible have someone observe the machine during first time operation for levelness—front to rear and wings to center frame. Adjust each as needed. For front to rear, either extend or shorten the length of the turnbuckle on the self-leveling. Never run the machine with the back lower (deeper) than the front. To adjust the machine from side to side, use the eyebolt on each wing. Adjust the inside wings first and then the outside wings. The gauge wheels should be set in field position to be 1/2" to 1 1/2" off the ground.
3. The ideal working speed is 6 to 7 mph. Working too slow may cause plugging, poor incorporation or mixing of crop residue and reduced weed kill. Running too fast may cause streaks in chemical incorporation and ridging.
4. The field cultivator is designed as a secondary tillage tool and is designed to leave a finished seedbed following some form of fall or spring tillage. For best results, if at all possible, run the machine at a slight angle to the rows. This will improve trash flow and help spread the residue more evenly throughout the field.
5. When you have the machine set to the desired working depth, set the depth stop slide on the depth control bar. This is located at the front of the machine on the brace bar. This will maintain a constant depth each time after raising and lowering the machine.
6. If after setting the depth stop, the detent on the tractor kicks out before the stop contacts the button on the depth stop, slow the hydraulic flow speed down. If this problem still persists, contact the factory service representative for other possible adjustments. **Do not try to adjust the rebound valve without first contacting the factory service rep.**
7. Adjust the drag to leave the desired results while maintaining the trash flow through the drag.
  - a.) On the spike drag, start with 5 links hanging from the chain in drag arm bottom slot. (This is the starting point for worst conditions.) The cleaner the ground, the shorter the pull chain may be pulled up. On the spike drag, one of the links in the first row of angles is turned over. This allows the trash to start flowing through the drag easier by changing the angle of the first row of teeth. Always make sure that the drag is never pulling off the hang chains. If so, shorten pull chains.



b.) On coil tine drags, start with the top eyebolt (12) centered. Then level drag mainframe (4R and 4L) by changing position of leveling bolt (21). There are two holes in the arm and four in the mainframe. One of these will get you where you need to be to level. To lay the teeth back, remove the clip pin (42) on each end and move strap adjustment by pushing the handle (7) forward. This strap has 5 holes and will let you lay the teeth back several degrees. If it is desired to set one row, usually the first, different than the rest as far as the angle is concerned, it can

be adjusted individually by loosening the U-bolt and set-screw on each end of the drag bar. Down pressure on the drag is achieved by lengthening the eyebolt (12) on the top bracket. Depending on the amount of down pressure, you may need to relevel the mainframe.

c.) If a basket is added, adjust the amount of down pressure by either shortening the eyebolt for less pressure or lengthening the eyebolt for more pressure.



### Maintenance and Lubrication

1. Always use the transport lock when working or doing maintenance on the Field Cultivator. If folded, be sure your wing stop pins are in place. Read and understand all safety decals on your equipment.
2. During the first season of operation, and periodically after that, check your bolts for tightness. Check shank pivot bolts on the spring-loaded shank; these must remain tight to prevent excessive wear on the shank assembly.
3. Check wheel bearings occasionally for excessive endplay.
4. Replace or rotate worn parts as needed—bearings, sweeps, shanks, etc...
5. Check and tighten or replace any hydraulic leaks. Check hoses for any leaks. It is important that there are no leaks on the equipment that may change the depth when in field position.
6. **Grease gang bearings and wheel bearings sparingly.** Over greasing may cause damage to seals and reduce the life of the bearing. Grease hinge points periodically.
7. If machine is stored outdoors over the winter months it is a good idea to fold the machine then set it down on the ground so all of the cylinders are retracted to protect the cylinder rods. This will extend the life of the cylinder seals and reduce internal and external leaks that may cause future problems maintaining a level machine.
8. Check drag bolts and parts for looseness or excessive wear. Replace broken or bent teeth. Your drag is an important part of the tillage operation.

By following and maintaining a routine service and lubrication program, your tillage equipment will give you many years of service.

**For more information on operating, adjusting or maintaining your Great Plains Field Cultivator contact your local Great Plains dealer or call**

**Great Plains Mfg. at (800) 255-9215**

#### Wheel Bearings

Grease every 50 hours (sparingly) and check for endplay.



#### Walking Beam Pivot Bearings

Grease every 100 hours and check for endplay



#### All Hinge Points

Grease every 10 hours.



#### Lubrication Legend



Multipurpose spray lube



Multipurpose grease lube



Multipurpose oil lube



Intervals at which lubrication is required



## Specifications and Capacities

### 3-Section Field Cultivator Specifications

Model No.	Tillage Width	Transport Height	Transport Width	Center Size	1st Wing	Ext. Size	No. of Shanks	Approx. Weight	Aprox. Horsepower
6113	13' 7"		13' 8"	10'	2'		23	4,010	70-90
6116	15' 11"		16'	10'	2'	28"	27	4,204	85-105
6318	18' 3"	7' 10"	13' 9"	10'	4'		31	5,543	100-120
6320	20' 7"	9'	13' 9"	10'	4'	28"	35	5,678	115-135
6323	22' 11"	10' 2"	13' 9"	10'	6 1/2'		39	6,616	130-150
6325	25' 3"	11' 4"	13' 9"	10'	6 1/2'	28"	43	6,809	140-160
6328	27' 9"	12' 6"	13' 9"	10'	9'		47	7,241	150-170
6330	29' 11"	13' 8"	13' 9"	10'	10'		51	8,400	160-180
6332	32' 3"	14' 10"	13' 9"	10'	10'	28"	55	8,630	170-190
7332	32' 3"	13' 8"	16' 1"	12'	10'		55	8,630	170-190
7334	34' 7"	14' 10"	16' 1"	12'	11'		59	9,320	180-200
7337	36' 11"	16'	16' 1"	12'	12 1/2'		63	10,096	190-210
7341	41' 7"	14' 10"	16' 1"	12'	11'	84"	71	10,741	200-220
7344	43' 11"	16'	16' 1"	12'	12 1/2'	84"	75	10,979	220-240

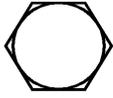
Walking Tandems on wings of Model 6323 and larger.  
Models 7341 and 7344 have flipover wing extensions.

With a continued commitment to constantly improving our products, these specifications are subject to change without notice.



# Appendix

## Torque Values Chart for Common Bolt Sizes

Bolt Size (inches)	Bolt Head Identification						Bolt Size (metric)	Bolt Head Identification					
													
	Grade 2		Grade 5		Grade 8			Class 5.8		Class 8.8		Class 10.9	
in-tpi <sup>1</sup>	N · m <sup>2</sup>	ft-lb <sup>3</sup>	N · m	ft-lb	N · m	ft-lb	mm x pitch <sup>4</sup>	N · m	ft-lb	N · m	ft-lb	N · m	ft-lb
1/4" - 20	7.4	5.6	11	8	16	12	M 5 X 0.8	4	3	6	5	9	7
1/4" - 28	8.5	6	13	10	18	14	M 6 X 1	7	5	11	8	15	11
5/16" - 18	15	11	24	17	33	25	M 8 X 1.25	17	12	26	19	36	27
5/16" - 24	17	13	26	19	37	27	M 8 X 1	18	13	28	21	39	29
3/8" - 16	27	20	42	31	59	44	M10 X 1.5	33	24	52	39	72	53
3/8" - 24	31	22	47	35	67	49	M10 X 0.75	39	29	61	45	85	62
7/16" - 14	43	32	67	49	95	70	M12 X 1.75	58	42	91	67	125	93
7/16" - 20	49	36	75	55	105	78	M12 X 1.5	60	44	95	70	130	97
1/2" - 13	66	49	105	76	145	105	M12 X 1	90	66	105	77	145	105
1/2" - 20	75	55	115	85	165	120	M14 X 2	92	68	145	105	200	150
9/16" - 12	95	70	150	110	210	155	M14 X 1.5	99	73	155	115	215	160
9/16" - 18	105	79	165	120	235	170	M16 X 2	145	105	225	165	315	230
5/8" - 11	130	97	205	150	285	210	M16 X 1.5	155	115	240	180	335	245
5/8" - 18	150	110	230	170	325	240	M18 X 2.5	195	145	310	230	405	300
3/4" - 10	235	170	360	265	510	375	M18 X 1.5	220	165	350	260	485	355
3/4" - 16	260	190	405	295	570	420	M20 X 2.5	280	205	440	325	610	450
7/8" - 9	225	165	585	430	820	605	M20 X 1.5	310	230	650	480	900	665
7/8" - 14	250	185	640	475	905	670	M24 X 3	480	355	760	560	1050	780
1" - 8	340	250	875	645	1230	910	M24 X 2	525	390	830	610	1150	845
1" - 12	370	275	955	705	1350	995	M30 X 3.5	960	705	1510	1120	2100	1550
1-1/8" - 7	480	355	1080	795	1750	1290	M30 X 2	1060	785	1680	1240	2320	1710
1 1/8" - 12	540	395	1210	890	1960	1440	M36 X 3.5	1730	1270	2650	1950	3660	2700
1 1/4" - 7	680	500	1520	1120	2460	1820	M36 X 2	1880	1380	2960	2190	4100	3220
1 1/4" - 12	750	555	1680	1240	2730	2010							
1 3/8" - 6	890	655	1990	1470	3230	2380							
1 3/8" - 12	1010	745	2270	1670	3680	2710							
1 1/2" - 6	1180	870	2640	1950	4290	3160							
1 1/2" - 12	1330	980	2970	2190	4820	3560							

<sup>1</sup> in-tpi = nominal thread diameter in inches-threads per inch

<sup>2</sup> N · m = newton-meters

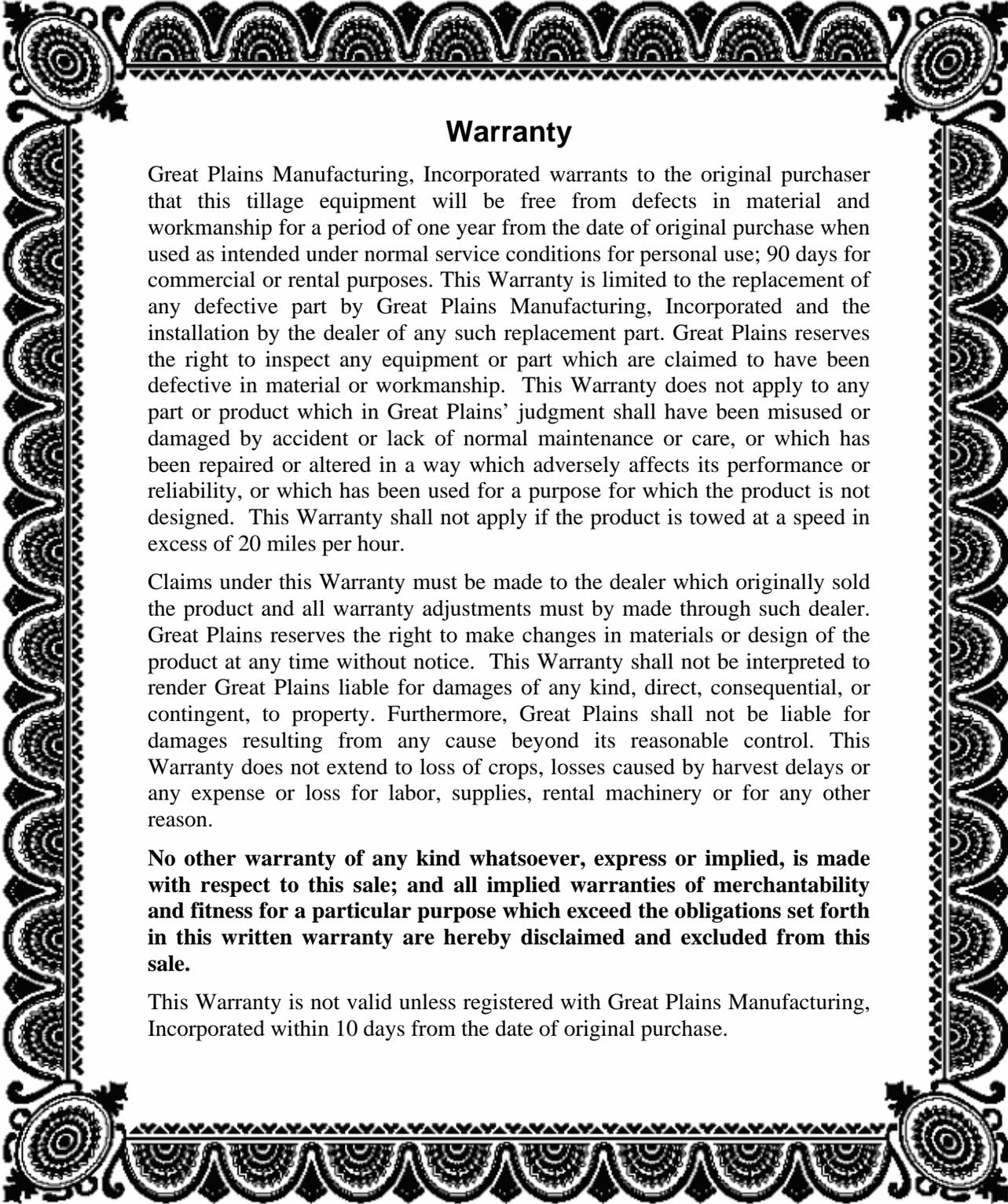
<sup>3</sup> ft-lb= foot pounds

<sup>4</sup> mm x pitch = nominal thread diameter in millimeters x thread pitch

Torque tolerance + 0%, -15% of torquing values. Unless otherwise specified use torque values listed above.

## Tire Inflation Chart

Tire Size	Inflation PSI	Tire Size	Inflation PSI
6.70 x 15" 4-Ply	32	11L x 15" 8-Ply Rib Implement	36
9.5L x 15" 8-Ply Rib Implement	44	11L x 15" 12-Ply Rib Implement	52
9.5L x 15" 12-Ply Rib Implement	64	11L x 15" F-Ply Rib Implement	90



## Warranty

Great Plains Manufacturing, Incorporated warrants to the original purchaser that this tillage equipment will be free from defects in material and workmanship for a period of one year from the date of original purchase when used as intended under normal service conditions for personal use; 90 days for commercial or rental purposes. This Warranty is limited to the replacement of any defective part by Great Plains Manufacturing, Incorporated and the installation by the dealer of any such replacement part. Great Plains reserves the right to inspect any equipment or part which are claimed to have been defective in material or workmanship. This Warranty does not apply to any part or product which in Great Plains' judgment shall have been misused or damaged by accident or lack of normal maintenance or care, or which has been repaired or altered in a way which adversely affects its performance or reliability, or which has been used for a purpose for which the product is not designed. This Warranty shall not apply if the product is towed at a speed in excess of 20 miles per hour.

Claims under this Warranty must be made to the dealer which originally sold the product and all warranty adjustments must be made through such dealer. Great Plains reserves the right to make changes in materials or design of the product at any time without notice. This Warranty shall not be interpreted to render Great Plains liable for damages of any kind, direct, consequential, or contingent, to property. Furthermore, Great Plains shall not be liable for damages resulting from any cause beyond its reasonable control. This Warranty does not extend to loss of crops, losses caused by harvest delays or any expense or loss for labor, supplies, rental machinery or for any other reason.

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

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