Read the operator 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!

Illustrations may show optional equipment not supplied with standard unit.
Machine Identification

Record your machine details in the log below. If you replace this manual, be sure to transfer this information to the new manual.

If you or the dealer have added options not originally ordered with the machine, or removed options that were originally ordered, the weights and measurements are no longer accurate for your machine. Update the record by adding the machine weight and measurements with the option(s) weight and measurements.

<table>
<thead>
<tr>
<th>Dealer Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
</tr>
<tr>
<td>Street:</td>
</tr>
<tr>
<td>City/State:</td>
</tr>
<tr>
<td>Telephone:</td>
</tr>
<tr>
<td>Email:</td>
</tr>
<tr>
<td>Dealer's Customer No.:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serial Number</td>
</tr>
<tr>
<td>Machine Height</td>
</tr>
<tr>
<td>Machine Length</td>
</tr>
<tr>
<td>Machine Width</td>
</tr>
<tr>
<td>Machine Weight</td>
</tr>
<tr>
<td>Year of Construction</td>
</tr>
<tr>
<td>Delivery Date</td>
</tr>
<tr>
<td>First Operation</td>
</tr>
<tr>
<td>Accessories</td>
</tr>
</tbody>
</table>

WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov
To our customer:

Congratulations on the purchase of your Great Plains product. Great Plains welcomes you to its growing family of new product owners. Your product has been designed and built by skilled workers using quality materials.

Your dealer has performed the necessary pre-delivery service to your machine, and will advise you of the proper maintenance and operating practices that will give you long, satisfactory use of your machine. Do not hesitate to contact your dealer when you have a question related to your machine.

Your machine has been designed to run efficiently in most operating conditions, and will perform relative to the service it receives. If you need customer service or repair parts, contact your dealer who has trained personnel, repair parts, and equipment specially designed for Great Plains products.

Read this manual carefully before using the machine. It will familiarize you with safety, operation, adjustments, and maintenance of your new equipment. This manual must always be kept with your machine.

Great Plains wants you to be satisfied with your product. If for any reason you do not understand any part of this manual or are otherwise dissatisfied, please take the following actions first:

1. Discuss the matter with your dealership service manager. Make sure he is aware of any problems so he can assist you.
2. If you are still unsatisfied, seek out the owner or general manager of the dealership.

If your dealer is unable to resolve the problem or the issue is parts related, please contact:

Great Plains Service Department
1525 E. North St.
P.O. Box 5060
Salina, KS, USA 67402-5060
Table of Contents

Important Safety Information.........................................................1
Introduction .............................................................................8
Preparation and Setup .............................................................9
  Prestart Checklist ...............................................................9
  Hitching Tractor to Hitch ......................................................9
  Hydraulic Hose Hookup .... ..................................................10
  Hitching Hitch to Implement ..............................................11
Operating Instructions .........................................................12
  Prestart Checklist .............................................................12
  Field Operation ..............................................................12
  Transporting ................................................................13
  Parking ...........................................................................13
Troubleshooting ........................................................................14
Maintenance and Lubrication....................................................15
  Maintenance .....................................................................15
  Storage ............................................................................15
  Lubrication ......................................................................16
Options ...................................................................................17
  Hitch Fertilizer Tank and Mount ....................................17
  Hitch Reinforcement Kit ..................................................17
  Hitch Setback Kit ............................................................17
Appendix ..................................................................................18
  Torque Values Chart .......................................................18
  Tire Inflation Chart ..........................................................18
  Specifications and Capacities ..........................................19
Warranty ..................................................................................20

© Copyright 2003, 2010, 2015, 2020. 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.

Trademarks of Great Plains Manufacturing, Inc. include: AccuShot, Max-Chisel, Row-Pro, Singulator Plus, Short Disk, Swath Command, Terra-Tine, Ultra-Chisel, and X-Press.
Brand and Product Names that appear and are owned by others are trademarks of their respective owners.

Printed in the United States of America
Cover
Important Safety Information

■ Look for Informational Symbols

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

NOTE indicates useful - but not crucial - information for machine operation, assembly, or adjustment. It may also direct you towards additional information.

■ Be Aware of Signal Words

Signal words designate a degree of level of hazard seriousness. The signal words are:

DANGER

DANGER indicates an imminent hazard which, if not avoided, will result in death or serious injury. This signal word is limited to the most extreme situations, typically for unguarded machine components.

WARNING

WARNING indicates a potential hazard which, if not avoided, could result in death or serious injury including hazards that are exposed when guards are removed. It also alerts against unsafe practices.

CAUTION

CAUTION indicates a potential hazard which, if not avoided, may result in minor or moderate injury. It also alerts against unsafe practices.

NOTICE

NOTICE indicates a potential hazard which, if not avoided, may result in moderate to severe damage to your machine, machine parts, or nearby property.

■ Be Familiar with Safety Decals

1. Thoroughly read and understand “Safety Decals” on page 5.
2. Read all instructions noted on the decals.

■ Wear Protective Equipment

1. Wear protective clothing and equipment appropriate for the job, such as safety glasses, hard hat, and ear plugs.
2. Clothing must fit snug without fringes and pull strings to avoid entanglement with moving parts.
3. Avoid using distracting multimedia devices, such as audio that requires headphones, tablet, or smart phone, while operating machinery.

■ Use A Safety Chain

1. A safety chain will help control drawn machinery if the machinery separates from tractor drawbar.
2. Use a chain with a strength rating equal to or greater than the gross weight of towed machinery.
3. Attach chain to tractor drawbar support or other specified anchor location. Allow only enough slack in chain to permit turning.
4. Replace chain if any links or end fittings are broken, stretched or damaged.
5. Do not use safety chain for towing.
Avoid High Pressure Fluids

**WARNING: Escaping Fluid Hazard**

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

1. Make sure all hydraulic fluid connections are tight and all hydraulic hoses and lines are in good condition before applying pressure to the system.
2. Avoid the hazard by relieving pressure before disconnecting hydraulic lines or performing any work on the system.
3. Wear protective gloves and safety glasses or goggles when working with hydraulic systems.
4. Escaping fluid under pressure can penetrate the skin causing serious injury.
5. Use a piece of paper or cardboard, NOT BODY PARTS, to check for suspected leaks.
6. DO NOT DELAY. If an accident occurs, seek immediate medical assistance from a physician familiar with this type of injury. Any fluid injected into the skin or eyes must be treated within a few hours or gangrene can result.

Tire Safety

**NOTE: Use Correct Tire Changing Tools**

*Tire changing can be dangerous and must be performed by trained personnel using correct tools and equipment.*

1. When inflating tires, use a clip-on chuck and extension hose long enough for you to stand to one side—not in front of or over tire assembly. Use a safety cage if available.
2. When removing and installing wheels, use wheel-handling equipment adequate for weight involved.

Use Safety Lights and Devices

**NOTE: Always Use Safety Lighting**

*Slow-moving tractors and towed machinery can create a hazard when driven on public roads. They are difficult to see, especially at night.*

1. If equipped, use flashing warning lights and turn signals whenever driving on public roads.
2. Use safety devices provided with implement.
3. Keep safety lights and signs clean and visible from rear of the machine.

Keep Riders Off Machinery

**WARNING: Do Not Ride Machinery**

*Riders obstruct the operator’s view. Riders could be struck by foreign objects or thrown from the machine.*

1. Never carry riders or use machinery as a personal lift.
2. Riders obstruct the operators view.
3. Riders can be struck by foreign objects or thrown from the machine.
4. Never allow children to operate equipment.
5. Keep all bystanders away from machine during operation.
NOTE: Maximum Transport Speed

Maximum transport speed for implement is 30 kph (20 mph). Some rough terrains require a slower speed. Sudden braking can cause a towed load to swerve and upset.

1. Comply with state and local laws.
2. Carry reflectors or flags to mark machinery in case of breakdown on the road.
3. Keep clear of overhead power lines and other obstructions when transporting.
4. Do not fold or unfold the implement while the tractor is moving.
5. Do not tow an implement that, when fully loaded, weighs more than 1.5 times the weight of towing vehicle.
6. Turning tractor too tight can cause implement to tip over.
7. When towing on a trailer, secure implement with tie downs and chains.
8. When towing on a trailer, sudden braking can cause a trailer to swerve and upset. Reduce speed if trailer is not equipped with brakes.

Shutdown and Storage

1. Park the tractor and implement on a solid, level surface where children normally do not play.
2. Raise the wings, put tractor in park or set park brake. Turn off engine and remove switch key to prevent unauthorized starting.
3. Wait for all components to come to a complete stop before leaving the leaving the operator’s seat.
4. Turn lockout valve and wing lock levers to locked position to prevent the wings from lowering.
5. Install transport lock onto lift cylinders then lower implement on locks to relieve pressure on hydraulic hoses.
6. Detach the tractor. Secure the implement using blocks.

Practice Safe Maintenance

1. Understand procedure before doing work. Use proper tools and equipment. Refer to this manual.
2. Work in a clean, dry area.
3. Lower the implement. Put tractor in Park, turn off engine. To prevent unauthorized starting, remove key before performing maintenance or service work.
4. If work must be performed with wings raised, turn lockout valve and wing lock levers to locked position.
5. Make sure all moving parts have stopped and all system pressure is relieved.
6. Disconnect lighting harness from the tractor before servicing or adjusting electrical systems.
7. Welding: Disconnect lighting harness from the tractor. Protect hydraulic lines. Avoid fumes from heated paint.
8. Inspect all parts. Make sure parts are in good condition and installed properly.
9. Do not alter this machine in a way which will adversely affect its performance.
10. Remove buildup of grease, oil or debris.
11. Remove all tools and unused parts from implement before operation.
Safety At All Times

Properly understand the instructions in this manual before operation. Read all instructions noted on the safety decals.

NOTE: Read Operator Manual

Thoroughly read and understand the instructions in this manual before operation. Read all instructions noted on the safety decals.

NOTE: Do Not Use Untrained Operators

Do not allow anyone to operate this equipment who has not fully read and comprehended this manual and who has not been properly trained in the safe operation of the equipment.

1. The operator must not use drugs or alcohol as they can change the alertness or coordination of that person while operating equipment. If over-the-counter drugs are used, seek medical advice on whether you can safely operate equipment.

2. Operator must be familiar with all functions of the tractor and attachments, and be able to handle emergencies quickly.

3. Make sure all guards and shields are in place and secured before operating the implement.

4. Keep all bystanders away from equipment and work area.

5. Operator must start tractor and operate controls from the driver’s seat only, never from the ground.

6. Dismounting from a moving tractor can cause serious injury or death.

7. Be familiar with all functions of the implement.

8. Do not leave implement unattended with tractor engine running.

9. Do not stand between the tractor and the implement during hitching.

10. Watch out for wires, trees, etc., when folding and raising the implement.

11. Turning tractor too tight can cause hitched implement to ride up on wheels. This can result in injury or equipment damage.

Handle Chemicals Properly

Properly handle chemicals. Agricultural chemicals can be dangerous. Improper use can seriously injure persons, animals, plants, soil and property.

1. Read and follow chemical supplier instructions.

2. Wear protective clothing.

3. Handle all chemicals with care.

4. Agricultural chemicals can be dangerous. Improper use can seriously injure persons, animals, plants, soil and property.

5. Inhaling smoke from any type of chemical fire is a serious health hazard.

6. Store or dispose of unused chemicals as specified by the chemical manufacturer.

7. If chemical is swallowed, carefully follow the chemical manufacturer’s recommendations and consult with a doctor.

8. If persons are exposed to a chemical in a way that could affect their health, consult a doctor immediately with the chemical label or container in hand. Any delay could cause serious illness or death.

9. Dispose of empty chemical containers properly. By law rinsing of the used chemical container must be repeated three times. Puncture the container to prevent future use. An alternative is to jet-rinse or pressure rinse the container.

10. Wash hands and face before eating after working with chemicals. Shower as soon as application is completed for the day.

11. Apply only with acceptable wind conditions. Windspeed must be below 5 mph. Make sure wind drift of chemicals will not affect any surrounding land, people or animals.

12. Never wash out a hopper within 100 feet (30 m) of any freshwater source or in a car wash.
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 decal 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
818-003C

One decal on end of tank

Warning: Negative Tongue Weight
818-019C

One decal on tongue

Danger: Possible Chemical Hazard
818-323C

One decal on the side of tank
Amber Reflectors
838-265C

Reflector located on the outside of cylinder mounts and front side of cylinders; 4 reflectors total

Red Reflectors
838-266C

Reflector located on back side of cylinder mounts; 2 reflectors total

Daytime Reflectors
838-267C

Reflector located on back side of cylinder mounts; 2 reflectors total
Danger: Read Manual  
848-512C

On tongue at hitch;  
1 total

Warning: High Pressure Fluid  
818-339C

One decal located on tongue

Caution: Tire 90 PSI  
838-295C

Decal located on each wheel; 4 decals total
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 setup, maintenance and safe operating practices will help you get years of satisfactory use from the machine.

Description of Unit
The Sub-Soiler Hitch in conjunction with the Sub-Soiler In-line Ripper are designed to cut and size residue, till soil for faster seedbed warming, break up soil crust on hard dried fields while eliminating compaction layers.

Models Covered
Sub-Soiler Hitch

Using This Manual
This manual will familiarize you with safety, assembly, operation, adjustments, 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.

Owner Assistance
If you need customer service or repair parts, contact a Great Plains dealer. They have trained personnel, repair parts and equipment specially designed for Great Plains products.

Your machine’s parts were specially designed and should only be replaced with Great Plains parts. Always use the serial and model number when ordering parts from your Great Plains dealer.

Record your implement model and serial number here for quick reference:

Model Number: __________________________
Serial Number: __________________________

Further Assistance
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 dealership service manager. Make sure they are aware of any problems so they can assist you.
2. If you are still unsatisfied, seek out the owner or general manager of the dealership.
3. For further assistance write to:

Product Support
Great Plains Mfg. Inc., Service Department
PO Box 5060
Salina, KS 67402-5060
Preparation and Setup

This section will help you prepare your tractor and implement for use. Before using the implement in the field, you must hitch the implement to a suitable tractor and level the implement.

**Prestart Checklist**

1. Read and understand “Important Safety Information,” page 1.
2. Check that all working parts are moving freely, bolts are tight, and cotter pins are spread.
3. Check that all grease fittings are in place and lubricated. Refer to “Lubrication,” page 16.
4. Check that all safety decals and reflectors are correctly located and legible. Replace if damaged. See “Safety Decals,” page 5.
5. Inflate tires to pressure recommended and tighten wheel bolts as specified. See “Appendix,” page 18.

**Hitching Tractor to Hitch**

⚠️ **DANGER**

*You may be severely injured or killed by being crushed between the tractor and drill. Do not stand or place any part of your body between drill and moving tractor. Stop tractor engine and set park brake before installing the hitch bolt.*

Refer to Figure 1

1. For most hitch heights the hitch should be installed inverted using the middle two bolts holes. If the tractor hitch height is extremely high or low, and the turnbuckle will not allow the frame to be leveled, the hitch can be moved up or down in the holes provided. The hitch can also be flipped over for more adjustment.
2. Back tractor to implement. Use the screw jack to adjust the hitch up or down as needed.
3. Finish backing the tractor until the hitch pin holes align. Place the tractor in park and pin the implement to the tractor using the tractor's original equipment hitch pin as outlined in the tractor’s operator manual.
4. Securely attach the implement’s safety chain to the tractor as outlined in the tractor’s operator manual.
5. Connect the light harness and plug in the hydraulic hoses. (See *Hydraulic Hose Hookup* page 10).
Refer to Figure 2
5. Lower the jack until the full weight of the implement is on the tractor drawbar. Remove the jack from the side of the tongue and store it on the storage stob located on the top left-hand side of the coulter frame.

Hydraulic Hose Hookup
Refer to Figure 3
Great Plains hydraulic hoses are coded to help you hookup hoses to your tractor outlets. To distinguish hoses on the same hydraulic circuit, refer to plastic hose holders. Hose under extended-cylinder symbol feeds cylinder base ends. Hose under retracted-cylinder symbol feeds cylinder rod ends.

Bleeding the Hydraulics

**WARNING**
Escaping fluid under pressure can have sufficient force to penetrate the skin. Check all hydraulic lines and hoses before applying pressure. Fluid escaping from a very small hole can be almost invisible. Use paper or cardboard, not body parts, to check for suspected leaks. If injured, seek medical assistance from a doctor that is familiar with this kind of injury. Foreign fluids in the tissue must be surgically removed within a few hours or gangrene will result.

Hydraulics must be bled of air before hitch operation. If the hydraulics are not bled, the cylinders will move with jerky, uneven motions. The hydraulics should be bled during initial hitch setup. If the hydraulics have not been bleed, or if you replace a hydraulic component during the life of the hitch, follow these procedures.

1. Check hydraulic fluid in tractor reservoir and fill reservoir to proper level. Drill-system capacity is about 1 1/2 gallons. Add fluid to system as needed. A low reservoir level may draw air back into the system, causing jerky or uneven cylinder movements.
2. Jack up hitch and install transport lock channels onto cylinders.
3. With tractor engine idling, engage tractor hydraulics to extend cylinder rods. When cylinder rods are completely extended, hold remote lever on for one minute.
4. Remove lock channels.
5. Retract cylinders. Extend cylinders again and hold remote lever on for one more minute. Repeat this step two more times to completely bleed system.
6. If any air still is trapped in either cylinder, the cylinder will have a spongy, erratic movement and the implement will not raise evenly. If necessary, repeat bleeding process.
7. Refill tractor hydraulic fluid reservoir to its proper level.
Hitching Hitch to Implement

**DANGER**
You may be severely injured or killed by being crushed between the tractor and implement. Do not stand or place any part of your body between implement and moving tractor. Stop tractor engine and set park brake before installing the hitch pin.

1. Slowly back hitch to the implement. Use the lift hydraulics to raise or lower the hitch for vertical alignment.

Refer to Figure 4

2. The lower hitch on the sub-soiler hitch is adjustable to be used as either a Category II, IIIN, or III hitch. To change between a Category II, IIIN, or III hitch remove pin, lift and slide the lower hitch to either side accordingly.

3. Be sure that all hitch 3-Point hitch points are securely pinned before lifting the implement.

**WARNING**
Make sure the hitch is securely hitched to the tractor before raising implement. If hitch is not secured to tractor Negative Tongue Weight will result when lifting implement causing hitch tongue to elevate.

Refer to Figure 5

4. Level the implement by adjusting the length of the top link.

5. Loosen the 1 1/4” jam nut (1) and rotate the nut (2) to screw the threads in or out to make adjustment.


7. Plug lead from implement light harness into hitch receptacle.
Operating Instructions

This section covers general operating procedures. Experience, machine familiarity and the following information will lead to efficient operation and good working habits. Always operate farm machinery with safety in mind.

Prestart Checklist
2. Lubricate implement as indicated under “Lubrication,” page 16.
4. Check all bolts, pins and fasteners. Torque as shown in “Appendix,” page 18.
5. Check implement for worn or damaged parts. Repair or replace parts before going to the field.

Field Operation

DANGER
You may be severely injured or killed by being crushed between the tractor and implement. Do not stand or place any part of your body between implement and moving tractor. Stop tractor engine and set park brake before installing pins.
1. Hitch implement to a suitable tractor.

Refer to Figure 6

2. Remove transport lock channels and place in storage position.
3. Pull forward, lower implement and begin tilling.
4. Always lift implement out of the ground when turning at field ends and for other short-radius turns.
Transporting

**WARNING**

*Towing the implement at high speeds or with a vehicle that is not heavy enough could lead to loss of vehicle control. Loss of vehicle control could lead to serious road accidents, injury and death. To reduce the hazard, do not exceed 20 mph. Check that your tractor has enough ballast to handle the weight of the implement. Refer to your tractor operator's manual for ballast requirements.*

Before transporting the implement, follow and check these items:

**Clearance.** Remember that the implement can be wider than the tractor. Allow safe clearance.

**Road rules.** Comply with all federal, state and local safety laws when traveling on public roads.

5. Check to be sure the hitch is securely hitched to the tractor and the safety chain is in place.

6. Check to be sure the hitch is securely fastened to the sub-soiler.

*Refer to Figure 7*

7. Install both transport lock channels over the extended cylinder rods.

**Parking**

Perform the following steps when parking the implement. Refer to “Storage”, page 15, to prepare for long-term storage.

1. Park implement on a level, solid area.

2. Lower implement until shanks are resting on the ground.

3. Unplug light harness lead from tractor receptacle. Do not allow lead to rest on the ground.

4. Unhitch from the tractor drawbar.

**WARNING**

*Never unhitch from the tractor while implement is attached to the hitch without lowering implement to the ground first. Negative Tongue Weight will result causing tongue to elevate.*
### Troubleshooting

<table>
<thead>
<tr>
<th>Problem</th>
<th>Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hitch does not raise or lower smoothly</td>
<td>Leaking hydraulic cylinders (external or internal)</td>
<td>Install seal kit or replace cylinder.</td>
</tr>
<tr>
<td></td>
<td>Leaking hydraulic fittings.</td>
<td>Check fittings for leaks, see page 10 for safety message, tighten or replace.</td>
</tr>
<tr>
<td></td>
<td>Air in the hydraulic system.</td>
<td>Bleed hydraulics, refer to page 10.</td>
</tr>
</tbody>
</table>
Maintenance and Lubrication

Maintenance

Proper servicing and maintenance is the key to long implement life. With careful and systematic inspection, you can avoid costly maintenance, downtime and repair. Always turn off and remove the tractor key before making any adjustments or performing any maintenance.

⚠️ WARNING

You may be severely injured or killed by being crushed under the falling implement. Always have frame sufficiently blocked up when working on implement.

⚠️ WARNING

Escaping fluid under pressure can have sufficient pressure to penetrate the skin. Check all hydraulic lines and fittings before applying pressure. Fluid escaping from a very small hole can be almost invisible. Use paper or cardboard, not body parts, and wear heavy gloves to check for suspected leaks. If injured, seek medical assistance from a doctor that is familiar with this type of injury. Foreign fluids in the tissue must be surgically removed within a few hours or gangrene will result.

1. After using the implement for several hours, check all bolts to be sure they are tight.
2. Lubricate areas listed under “Lubrication”, page 16.

Storage

Store implement where children do not play. If possible, store the implement inside for longer life.

Refer to Figure 8

5. Remove transport locks from cylinders and place them in their storage position.
6. Lower hitch to the ground and retract cylinders.
7. Remove any dirt and debris that can hold moisture and cause corrosion.
8. Lubricate areas noted under “Lubrication”, page 16.
9. Inspect implement for worn or damaged parts. Make repairs and service during the off season.
10. Use spray paint to cover scratches, chips and worn areas on the implement to protect the metal.
Lubrication

Transport Pivot Arms

Type of Lubrication: Grease
Quantity = Until grease emerges

Wheel Bearings

Type of Lubrication: Grease
Quantity = Repack
Options

Hitch Fertilizer Tank and Mount
To order the hitch fertilizer tank and mount, contact your Great Plains dealer.

<table>
<thead>
<tr>
<th>Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tank and Mount Kit</td>
<td>599-012A</td>
</tr>
</tbody>
</table>

Hitch Reinforcement Kit
The hitch reinforcement kit is used to strengthen the hitch frame to accommodate heavier implements.

To order the hitch reinforcement kit, contact your Great Plains dealer.

<table>
<thead>
<tr>
<th>Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reinforcement Kit</td>
<td>599-013A</td>
</tr>
</tbody>
</table>

Hitch Setback Kit
This accessory extends the 3-point hitch to eliminate interference with:

- auxiliary hitches  
  (such as Great Plains SSH)

when the drill has:

- 25 Series row units, or 10 Series HD openers and
- unit-mounted coulters.

<table>
<thead>
<tr>
<th>Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 Series SSH Setback Kit</td>
<td>118-130A</td>
</tr>
</tbody>
</table>
Appendix

Torque Values Chart

<table>
<thead>
<tr>
<th>Bolt Size</th>
<th>Grade 2</th>
<th>Grade 5</th>
<th>Grade 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4-20</td>
<td>7.4</td>
<td>5.6</td>
<td>11</td>
</tr>
<tr>
<td>3/16-18</td>
<td>9.5</td>
<td>6.6</td>
<td>13</td>
</tr>
<tr>
<td>5/32-24</td>
<td>15</td>
<td>11</td>
<td>24</td>
</tr>
<tr>
<td>7/32-24</td>
<td>8.5</td>
<td>6.6</td>
<td>27</td>
</tr>
<tr>
<td>1/8-24</td>
<td>17</td>
<td>13</td>
<td>26</td>
</tr>
<tr>
<td>5/32-24</td>
<td>31</td>
<td>22</td>
<td>47</td>
</tr>
<tr>
<td>7/32-24</td>
<td>43</td>
<td>32</td>
<td>47</td>
</tr>
<tr>
<td>9/32-24</td>
<td>66</td>
<td>49</td>
<td>105</td>
</tr>
<tr>
<td>1/2-20</td>
<td>75</td>
<td>55</td>
<td>115</td>
</tr>
<tr>
<td>5/16-16</td>
<td>95</td>
<td>70</td>
<td>150</td>
</tr>
<tr>
<td>9/32-18</td>
<td>105</td>
<td>95</td>
<td>165</td>
</tr>
<tr>
<td>7/32-18</td>
<td>130</td>
<td>97</td>
<td>190</td>
</tr>
<tr>
<td>7/16-14</td>
<td>150</td>
<td>110</td>
<td>230</td>
</tr>
<tr>
<td>1/2-13</td>
<td>260</td>
<td>190</td>
<td>405</td>
</tr>
<tr>
<td>3/2-20</td>
<td>225</td>
<td>165</td>
<td>385</td>
</tr>
<tr>
<td>5/16-12</td>
<td>250</td>
<td>185</td>
<td>460</td>
</tr>
<tr>
<td>9/32-18</td>
<td>340</td>
<td>250</td>
<td>875</td>
</tr>
<tr>
<td>7/32-18</td>
<td>370</td>
<td>275</td>
<td>955</td>
</tr>
<tr>
<td>1/2-12</td>
<td>480</td>
<td>355</td>
<td>1080</td>
</tr>
<tr>
<td>1/14-12</td>
<td>540</td>
<td>395</td>
<td>1210</td>
</tr>
<tr>
<td>1/2-12</td>
<td>680</td>
<td>500</td>
<td>1500</td>
</tr>
<tr>
<td>1/16-12</td>
<td>750</td>
<td>555</td>
<td>1680</td>
</tr>
<tr>
<td>3/2-12</td>
<td>890</td>
<td>655</td>
<td>1990</td>
</tr>
<tr>
<td>1/2-12</td>
<td>1010</td>
<td>745</td>
<td>2270</td>
</tr>
<tr>
<td>1/2-12</td>
<td>1180</td>
<td>870</td>
<td>2640</td>
</tr>
<tr>
<td>1/2-12</td>
<td>1330</td>
<td>980</td>
<td>2970</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bolt Head Identification</th>
<th>Bolt Size</th>
<th>Grade 2</th>
<th>Grade 5</th>
<th>Grade 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>mm x pitch</td>
<td>5.8</td>
<td>8.8</td>
<td>10.9</td>
<td></td>
</tr>
<tr>
<td>Class 5.8</td>
<td>4</td>
<td>3</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Class 8.8</td>
<td>7</td>
<td>5</td>
<td>11</td>
<td>8</td>
</tr>
<tr>
<td>Class 10.9</td>
<td>17</td>
<td>12</td>
<td>26</td>
<td>17</td>
</tr>
</tbody>
</table>

Tire Inflation Chart

<table>
<thead>
<tr>
<th>Tire Size</th>
<th>PSI</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.50 x 20&quot; 4-Ply Drill Rib</td>
<td>28</td>
</tr>
<tr>
<td>9.0 x 22.5 10-Ply Highway Service 70</td>
<td>70</td>
</tr>
<tr>
<td>9.0 x 24&quot; 8-Ply Rib Implement</td>
<td>40</td>
</tr>
<tr>
<td>9.5L x 15&quot; 6-Ply Rib Implement</td>
<td>32</td>
</tr>
<tr>
<td>9.5L x 15&quot; 8-Ply Rib Implement</td>
<td>44</td>
</tr>
<tr>
<td>9.5L x 15&quot; 12-Ply Rib Implement</td>
<td>60</td>
</tr>
<tr>
<td>11L x 15&quot; 6-Ply Rib Implement</td>
<td>28</td>
</tr>
<tr>
<td>11L x 15&quot; 12-Ply Rib Implement</td>
<td>52</td>
</tr>
<tr>
<td>12.5L x 15&quot; 8-Ply Rib Implement</td>
<td>36</td>
</tr>
<tr>
<td>12.5L x 15&quot; 10-Ply Rib Implement</td>
<td>44</td>
</tr>
<tr>
<td>16.5L x 16.1&quot; 10-Ply Rib Implement</td>
<td>36</td>
</tr>
<tr>
<td>41 x 15&quot; x 18 - 22-Ply Rib Implement</td>
<td>44</td>
</tr>
</tbody>
</table>
### Specifications and Capacities

<table>
<thead>
<tr>
<th>Model</th>
<th>Implement Hitch</th>
<th>Implement Hitch SSH-E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>3040 lbs.</td>
<td>1379 kg</td>
</tr>
<tr>
<td>Quick Hitch</td>
<td>accommodates Category II, III-N, or III</td>
<td></td>
</tr>
<tr>
<td><strong>A</strong> Lift Capacity (at hitch point with 1850 psi tractor pressure)</td>
<td>15,000 lbs. (implement only)</td>
<td>6804 kg (implement only)</td>
</tr>
<tr>
<td></td>
<td>13,000 lbs. (with Fertilizer Tank)</td>
<td>5897 kg (with Fertilizer Tank)</td>
</tr>
<tr>
<td><strong>B</strong> Lift Range (at Quick Hitch)</td>
<td>14&quot; to 41&quot;</td>
<td>36 cm to 105 cm</td>
</tr>
<tr>
<td><strong>C</strong> Length (from Hitch Ring to Lower Quick Hitch Pin)</td>
<td>14&quot;</td>
<td>4.27 m</td>
</tr>
<tr>
<td><strong>Adjustable Dual Centers</strong></td>
<td>19 7/8&quot; or 24 1/2&quot;</td>
<td>50.5 cm or 62.3 cm</td>
</tr>
<tr>
<td><strong>Adjustable Gauge Wheel Centers</strong></td>
<td>From 76&quot; to 94&quot;</td>
<td>From 193 cm to 214.3 cm</td>
</tr>
<tr>
<td><strong>Tires</strong></td>
<td>Dual 12.5L-15 F-load rated tires on 8-bolt wheels</td>
<td></td>
</tr>
<tr>
<td><strong>D</strong> Distance (from center of tire to lower hitch point)</td>
<td>16 3/8&quot; (when raised)</td>
<td>41.6 cm (when raised)</td>
</tr>
<tr>
<td></td>
<td>34&quot; (when lowered)</td>
<td>86.4 cm (when lowered)</td>
</tr>
<tr>
<td><strong>Equipped with</strong></td>
<td>Floating Lower Link Arms (with pin to lock them rigid)</td>
<td></td>
</tr>
</tbody>
</table>

![Diagram of Implement Hitch SSH-E](image-url)
WARRANTY

Great Plains (a division of Great Plains Manufacturing, Inc.) warrants to the original purchaser that this Great Plains machine will be free from defects in material and workmanship for a period of one year (Parts & Labor) from the first use date when used as intended for personal use; ninety days for custom/commercial or rental use.

Second year limited warranty covers Parts ONLY (personal usage only, excluding labor and wear items). This warranty is limited to the replacement of any defective part by Great Plains. Great Plains reserves the right to inspect any equipment or part which are claimed to have been defective in material or workmanship.

The following items and/or conditions are NOT COVERED UNDER WARRANTY: Failures resulting from the abuse or misuse of the equipment, failures occurring as a result of accidental damage or Force Majeure, failures resulting from alterations or modifications, failures caused by lack of normal maintenance as outlined in the operator’s manual, repairs made by non-authorized personnel, items replaced or repaired due to normal wear (such as wear items and ground-engaging components including, but not limited to, disc blades, chisel points, tires, bushings, and scrapers), repeat repair due to improper diagnosis or improper repair by the dealer, temporary repairs, service call and/or mileage to and from customer location, overtime premium, or unit hauling expenses. The warranty may be voided if the unit is towed at speeds in excess of 20 miles per hour (32 kilometers per hour), or failures occurring from soils with rocks, stumps, or other obstructions.

Great Plains reserves the right to make changes in materials or design of the product at any time without notice. The warranty shall not be interpreted to render Great Plains liable for damages of any kind, direct or consequential or contingent to property. Furthermore, Great Plains shall not be liable for damages resulting from any cause beyond its control. This warranty does not extend to crop loss, losses caused by planting or harvest delays or any expense or loss of labor, supplies, rental machinery, or for any other reason.

No other warranty of any kind whatsoever expressed 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 by a certified Great Plains dealer.

Effective July 15, 2020
Table of Contents