

---

# Operator Manual

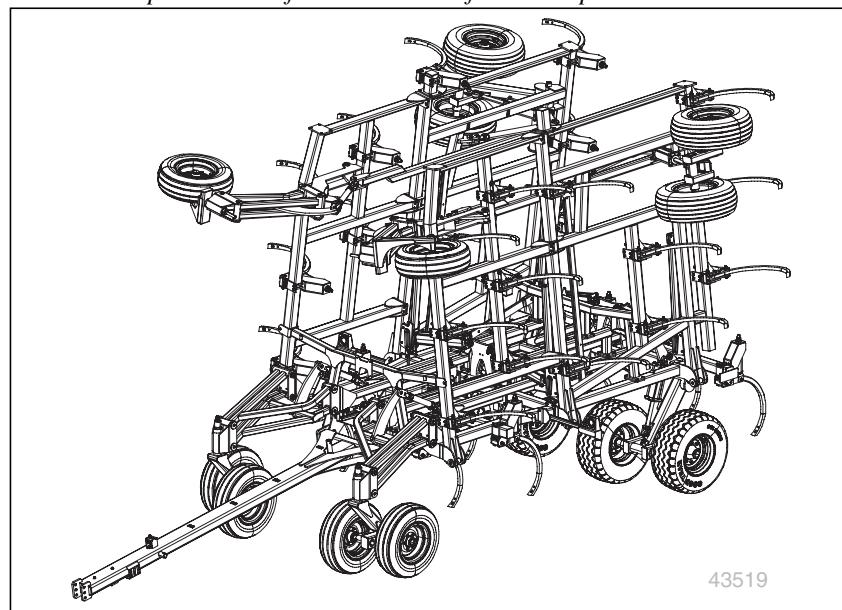
6321UC, 6323UC, 6327UC, 6329UC, 6330UC,  
6332UC, 6536UC 6538UC, 6542UC & 6544UC



## 6000 Series Ultra Chisel



*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 alternate spacings and/or optional equipment not supplied with standard unit.*

ORIGINAL INSTRUCTIONS

EN

© Copyright 2015

Printed 2015-01-05

562-094M





# Table of Contents

<b>Important Safety Information .....</b>	<b>1</b>	Transport Checklist .....	18
Safety Decals .....	5	General Operation and In-Field Adjustments.....	19
<b>Introduction .....</b>	<b>10</b>	Field Operations.....	20
Description of Unit .....	10	Field Set-Up Checklists.....	20
Intended Usage .....	10	Mechanical Checklist (Tractor Hitching).....	20
Models Covered .....	10	Electrical Checklist.....	20
Document Family .....	10	Hydraulic System Checklist.....	20
Using This Manual.....	10	Operations Checklists .....	20
Definitions.....	10	Hitching .....	20
Owner Assistance .....	11	Field Start.....	20
Product Support .....	11	Field Turns .....	20
<b>Preparation and Setup.....</b>	<b>12</b>	End Field Work.....	20
Post-Delivery/Seasonal Setup.....	12	Rear Attachment Settings .....	21
Pre-Planting Setup .....	12	Spike Drag Settings .....	21
Hitching Tractor to Implement .....	13	Heavy Coil Tine Settings .....	21
Hydraulic Hose Hookup.....	14	Reel Settings .....	22
Electrical Hookup.....	14	Parking .....	23
First Time Field Adjustments .....	15	Storage .....	23
Center and Wing Leveling .....	15	<b>Maintenance and Lubrication .....</b>	<b>24</b>
Wing Leveling (3 or 5 Section Wings) .....	15	Maintenance .....	24
Center and Wing Gauge Wheel Adjustments .....	15	Lubrication .....	25
<b>Operating Instructions .....</b>	<b>16</b>	<b>Appendix A - Reference Information.....</b>	<b>26</b>
Pre-Start Checklist .....	16	Specifications and Capacities .....	26
Unfolding .....	17	Tire Inflation Chart .....	27
Folding .....	17	Torque Values Chart.....	27
Transporting the Ultra Chisel.....	18	1-Year Limited Warranty .....	28
Check Tractor Capacity and Configuration.....	18	<b>Index.....</b>	<b>29</b>
When determining the weight of your Ultra Chisel, be sure to include the weight of any options.....	18		

© Copyright 2014, 2015 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: Singulator Plus, Swath Command, Terra-Tine.

Registered Trademarks of Great Plains Manufacturing, Inc. include:

Air-Pro, Clear-Shot, Discovator, Great Plains, Land Pride, MeterCone, Nutri-Pro, Seed-Lok, Solid Stand, Terra-Guard, Turbo-Chisel, Turbo-Chopper, Turbo Max, Turbo-Till, Ultra-Till, Verti-Till, Whirlfilter, Yield-Pro.  
Brand and Product Names that appear and are owned by others are trademarks of their respective owners.

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.

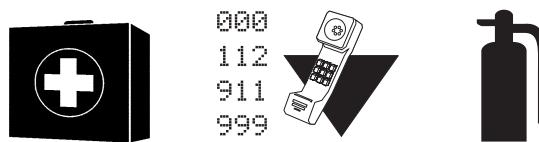


CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.



## 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.



## Be Familiar with Safety Decals

- ▲ Read and understand “Safety Decals” on page 5, thoroughly.
- ▲ Read all instructions noted on the decals.
- ▲ Keep decals clean. Replace damaged, faded and illegible decals.



## Wear Protective Equipment

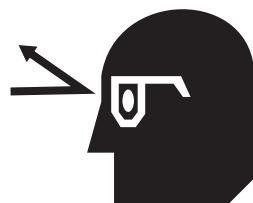
- ▲ Wear clothing and equipment appropriate for the job.
- ▲ Prolonged exposure to loud noise can cause hearing impairment or loss. Wear suitable hearing protection such as earmuffs or earplugs.
- ▲ Avoid wearing entertainment headphones while operating machinery. Operating equipment safely requires the full attention of the operator.



## 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, seek immediate medical assistance from a physician familiar with this type of injury.

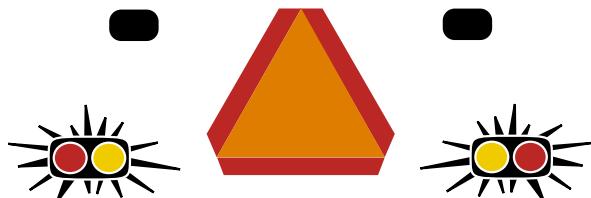


## Use Safety Lights and Devices

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.

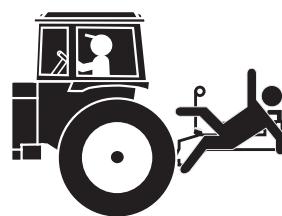
Use lights and devices provided with implement.



## 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.



## Transport Machinery Safely

Maximum transport speed for implement is 20 mph (32 km/h). Some rough terrains require a slower speed. Sudden braking can cause a towed load to swerve and upset.

- ▲ *Do not exceed 20 mph (32 km/h). 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 unless the towing vehicle is rated for, and ballasted for, the weight of the implement.*
- ▲ *Carry reflectors or flags to mark implement in case of breakdown on the road.*
- ▲ *Do not fold or unfold the implement while the tractor is moving.*



## Check for Overhead Lines

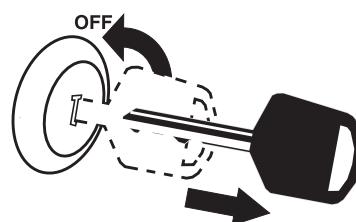
The implement requires at least 14 feet (4.3 m) vertical clearance in transport. Contacting overhead electrical lines can introduce lethal voltage levels on implement and tractor frames. A person touching almost any metal part can complete the circuit to ground, resulting in serious injury or death. At higher voltages, electrocution can occur without direct line or body contact.



- ▲ *Avoid overhead lines during folding, unfolding, transport and parking.*

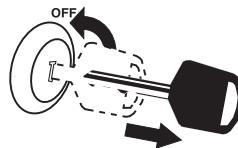
## Shutdown and Storage

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



## Practice Safe Maintenance

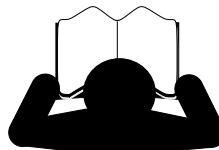
- ▲ Understand procedure before doing work. Use proper tools and equipment. Refer to this manual for additional information.
- ▲ Work in a clean, dry area.
- ▲ Lower the implement, put tractor in park, turn off engine, and remove key before performing maintenance.
- ▲ Make sure all system pressure is relieved.
- ▲ Disconnect battery ground cable (-) before servicing or adjusting electrical systems or before welding on implement.
- ▲ 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 implement before operation.



## Safety At All Times

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

- ▲ Be familiar with all implement functions.
- ▲ Operate machinery from the driver's seat only.
- ▲ Do not leave implement unattended with tractor engine running.
- ▲ Do not dismount a moving tractor. Dismounting a moving tractor could cause serious injury or death.
- ▲ Do not stand between the tractor and implement during hitching.
- ▲ Keep hands, feet and clothing away from moving parts.
- ▲ Watch out for wires, trees, etc., when folding and raising implement. Make sure all persons are clear of working area.



## Safety Decals

### Safety Reflectors and Decals

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

▲ *Read and follow decal directions.*

▲ *Keep lights in operating condition.*

▲ *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.*

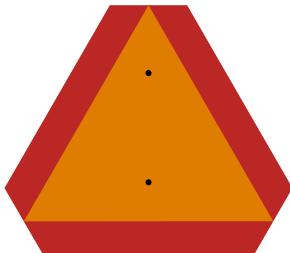
▲ *When ordering new parts or components, also request corresponding safety decals.*

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.

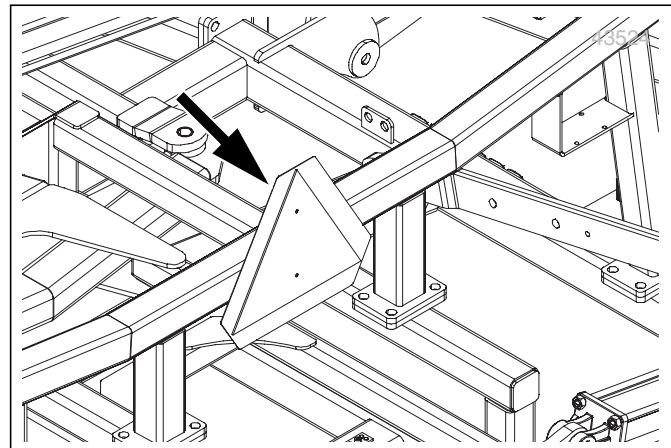
### Transport Decals

**818-055C**



#### Slow Moving Vehicle Reflector

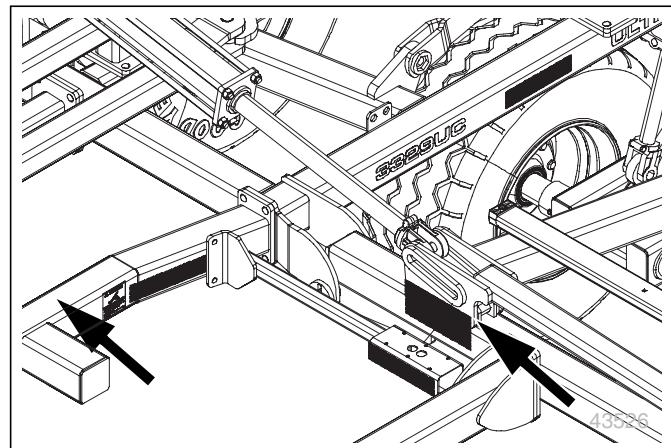
On center rear face of center frame tie tube;  
1 total



**838-614C**

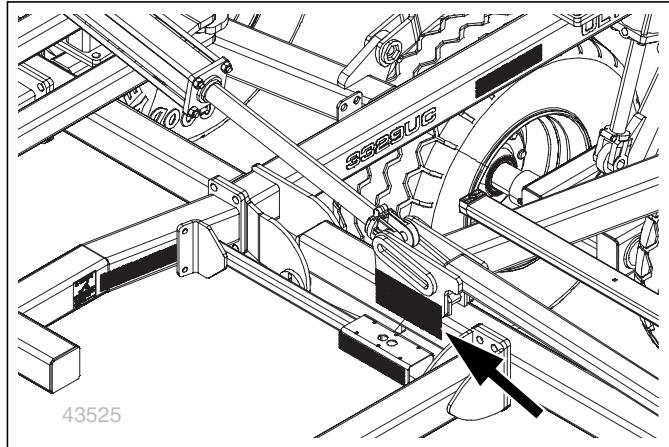
#### Red Reflectors

On rear face of light bracket mount tube;  
2 total

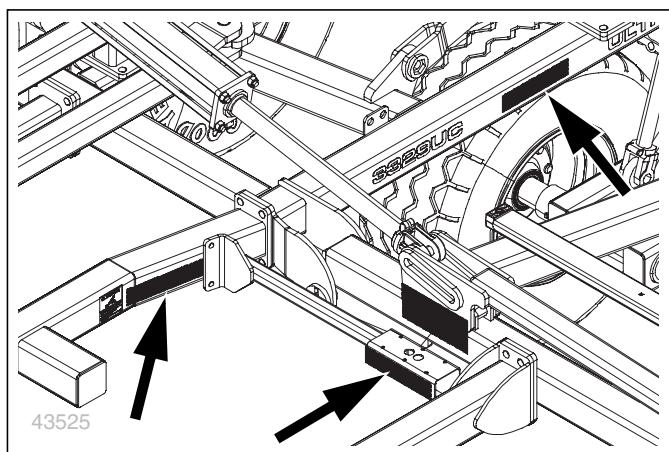


**838-603C****Daytime Reflectors**

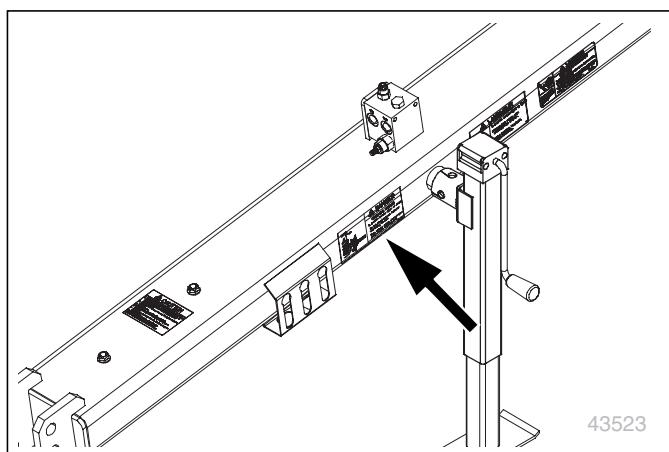
On rear face of light bracket mount tube, inboard of red reflectors;  
2 total

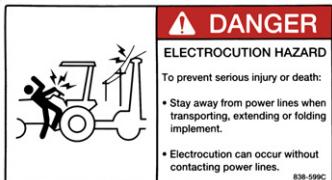
**838-615C****Amber Reflectors**

On outboard sides of vertical sections of light bracket mount tubes, on front face of wing tool bars at outboard ends;  
6 total

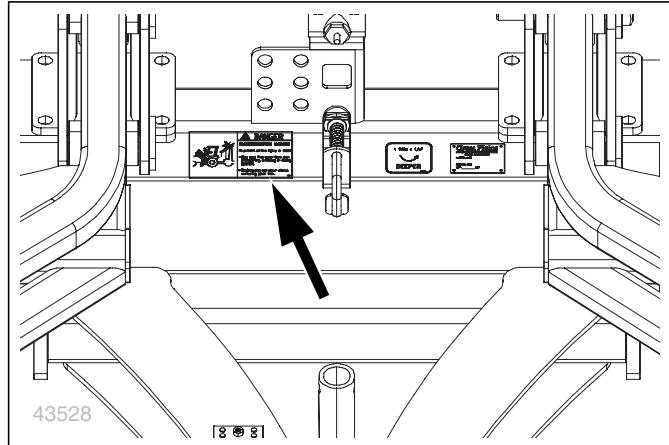
**838-600C****Danger: Hitch Crush**

On front face of hitch tube, each end;  
1 total

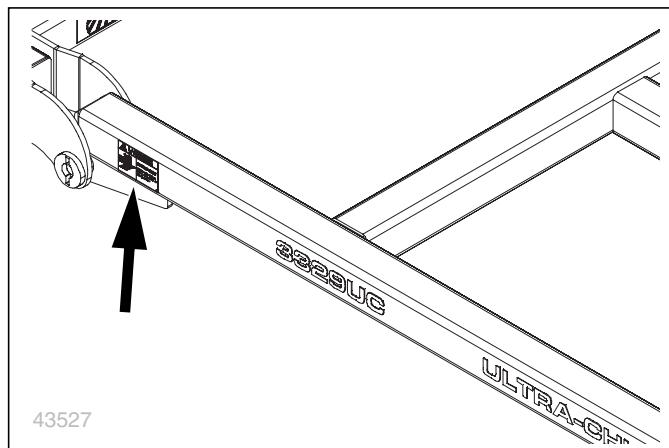


**838-599C****Danger: Electrocution**

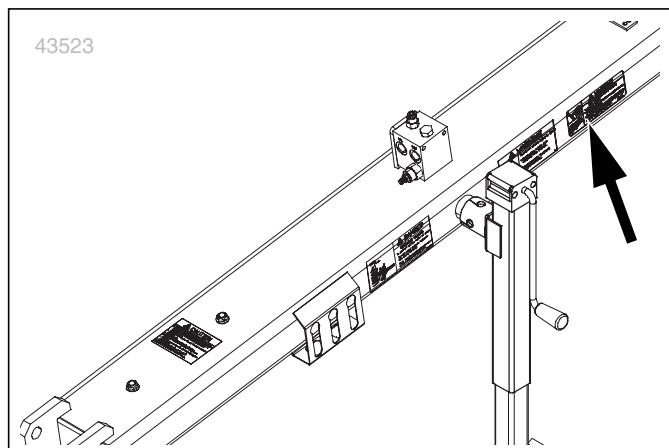
On front face of center frame tie tube, left of center;  
1 total

**Warning Decals****838-611C****Warning: Hand Crushing**

On front and rear of wing frames outer pivot points;  
4 total

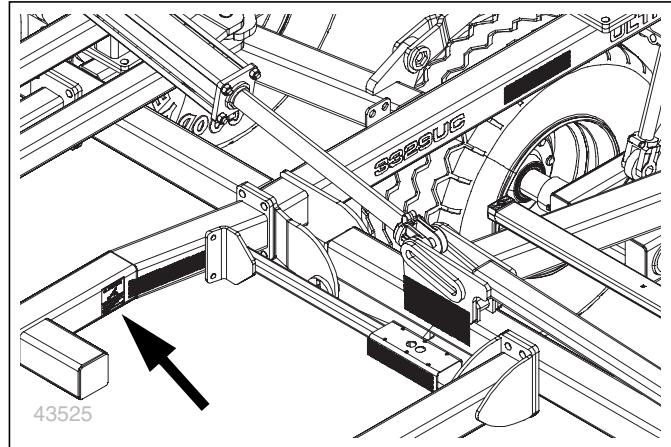
**838-094C****Warning: High Pressure Fluid Hazard**

On front face of hitch tube, just right of center;  
1 total

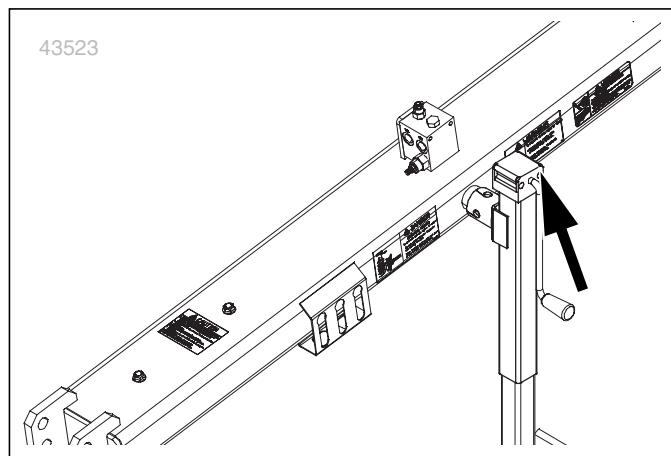


**838-602C****Warning: Pinching or Crushing**

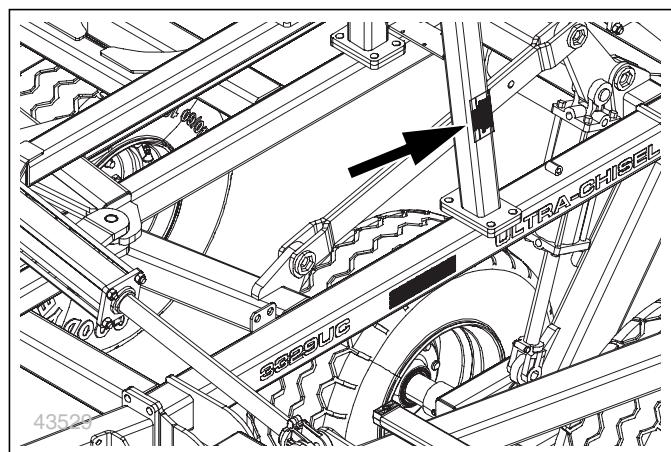
On front face of outer wing pivot plates;  
2 total

**838-606C****Warning: Pinching or Crushing**

On front face of outer wing pivot plates;  
2 total

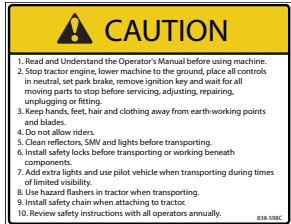
**Notice Decals****838-613C****Notice: Transport Locks**

On outside face of rear wing rest;  
2 total



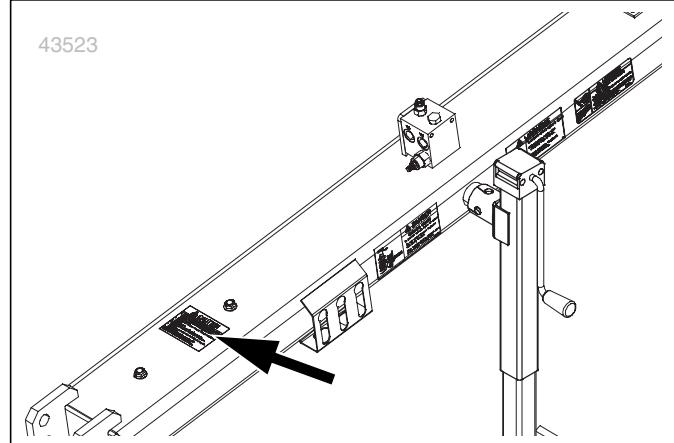
## Caution Decals

### 838-598C



### Caution: General Instructions

On front face of hitch tube;  
1 total





# Introduction

Great Plains welcomes you to its growing family of new product owners. The 6000 Series Ultra Chisel 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 Ultra Chisel is a three or five section primary soil preparation implement and can be used in the most adverse conditions. Various attachments can be added for further redistribution of residue, firm soil and break clods.

### Intended Usage

Use the 6000 Series Ultra Chisel to fracture soil above 8" to remove density layers while leaving the residue mixed at the surface to reduce wind erosion and assist with water filtration.

## Models Covered

6321UC	21-Foot	3-section
6323UC	24-Foot	3-section
6327UC	27-Foot	3-section
6329UC	29-Foot	3-section
6330UC	30-Foot	3-section
6332UC	32-Foot	3-section
6536UC	36-Foot	5-section
6538UC	38-Foot	5-section
6542UC	42-Foot	5-section
6544UC	44-Foot	5-section

## Document Family

562-094M	Owner's Manual (this document)
562-094P	Parts Manual
562-094Q	Pre-Delivery Manual

## 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.

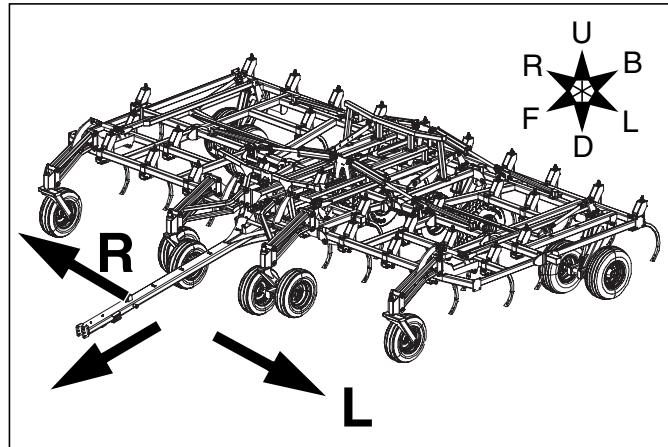


Figure 1  
Ultra Chisel

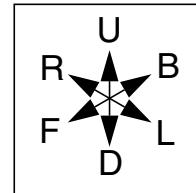
43520

Note: 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-hand and left-hand as used in this manual are determined by facing the direction the machine will travel while in use unless otherwise stated. An orientation rose in some line art illustrations shows the directions of: Up, Back, Left, Down, Front, Right.



### NOTICE

*A crucial point of information related to the current topic. Read and follow the directions to remain safe, avoid serious damage to equipment and ensure desired field results.*

## 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.

### *Refer to Figure 2*

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. The serial-number plate is located on the front face of the center frame bar truss.

Record your 6000 Series Ultra Chisel model and serial number here for quick reference:

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

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

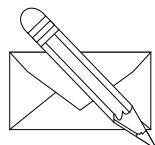
Your Great Plains dealer wants you to be satisfied with your new machine. If you do not understand any part of this manual or are not satisfied with the service received, please take the following actions.

1. Discuss the matter with your 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.

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

785-823-3276

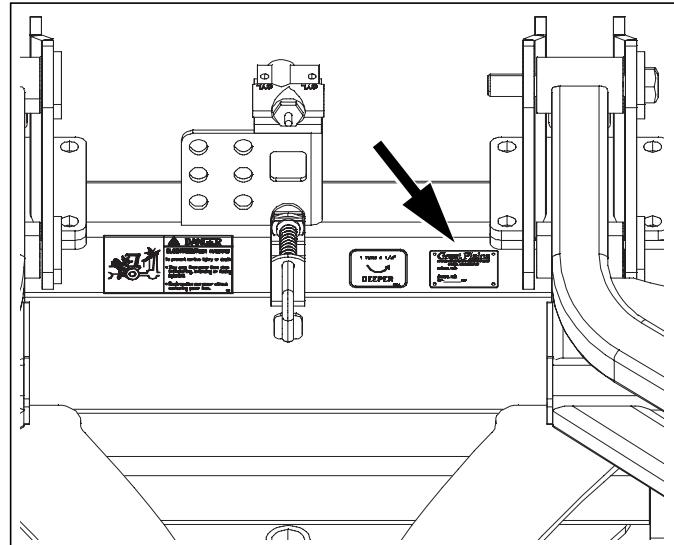


Figure 2  
Serial Number Plate

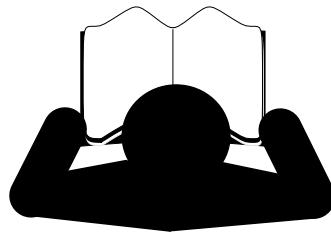
43528



# Preparation and Setup

This section helps you prepare your tractor and 6000 Series Ultra Chisel for use and covers tasks that need to be done seasonally, or when the tractor/Ultra Chisel configuration change.

Before using the Ultra Chisel you must level the implement, hook up the implement hydraulics to the tractor, and check that the hydraulics have been bled. Certain adjustments and calibrations must be checked periodically thereafter to insure maximum usage.



## Post-Delivery/Seasonal Setup

On initial delivery, use with a new tractor, and seasonally, check and as necessary, complete these items before continuing to the routine setup items:

- Bleed hydraulic fold system.
- Wing leveling and alignment (page 15).
- De-grease exposed cylinder rods if so protected at last storage.

## Pre-Planting Setup

Complete this checklist before routine setup:

- Read and understand "**Important Safety Information**" starting on page 1.
- Check that all working parts are moving freely, bolts are tight, and cotter pins are spread.
- Make sure your tractor horsepower matches the implement you are pulling. This is important so the implement can do the best possible job.
- Clean all hydraulic couplings and connect to tractor as shown on page 13 "**Hitching Tractor to Implement**".
- If machine is folded, remove the transport pins from wing stops. (DO NOT remove pins if the wing is leaning against the pins or putting pressure on the pins. Use 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, wing stops, etc.

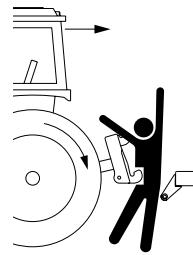
- After the machine is completely unfolded, raise and lower the Ultra Chisel several times to purge air from the hydraulic system. Again check for hydraulic leaks and tighten or replace if necessary.
- Check safety chain hookup. Make sure all warning lights are hooked up and functioning correctly.
- Check that all safety decals and reflectors are correctly located and legible. Replace if damaged. See "**Safety Decals**" on page 5.
- Inflate tires to pressure recommended and tighten wheel bolts as specified. See "**Tire Inflation Chart**" on page?
- Put transport locks 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.

## Hitching Tractor to Implement

### **DANGER**

*Crushing Hazard:*

*Do not stand or place any body part between Ultra Chisel and moving tractor. You may be severely injured or killed by being crushed between the tractor and the Ultra Chisel. Stop tractor engine and set parking brake before attaching cables and hoses.*



To prevent soil compaction on rows, set tractor wheels between rows. For hillsides and steep slopes, set tractor wheels as wide as possible for maximum stability.

1. Raise tractor three-point arms (if equipped) clear up to clear Ultra Chisel.
2. 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.
3. Hitch the tractor to the Ultra Chisel using the block or yoke clevis determined by the tractor drawbar. Use the correct size pin for clevis or block.

*Load Sway Hazard:*

*Lock drawbar swing to center position to minimize any side-to-side sway to assure proper tracking in the field, and safe road travel. See “Transporting the Ultra Chisel” on page 18, for safe transporting*

*Refer to Figure 3*

4. Use jack ① to raise and lower Ultra Chisel tongue.

*Refer to Figure 4*

5. After hitching tractor to Ultra Chisel, store jack on storage tube ② on top rear of Ultra Chisel tongue.
6. Secure Ultra Chisel safety chain to an anchor on the tractor capable of pulling the unit.

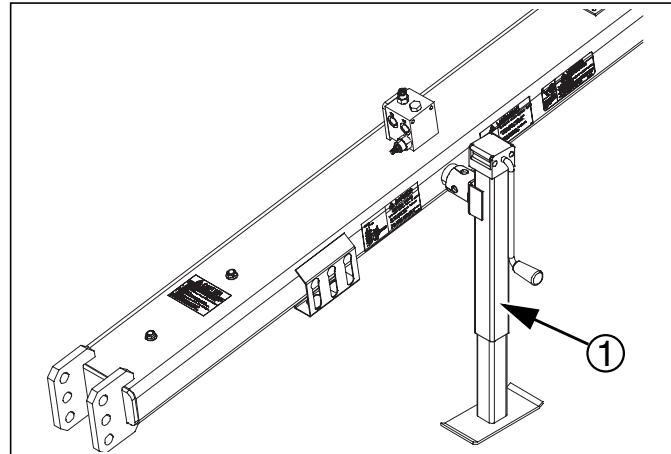


Figure 3  
Tongue on Jack

43523

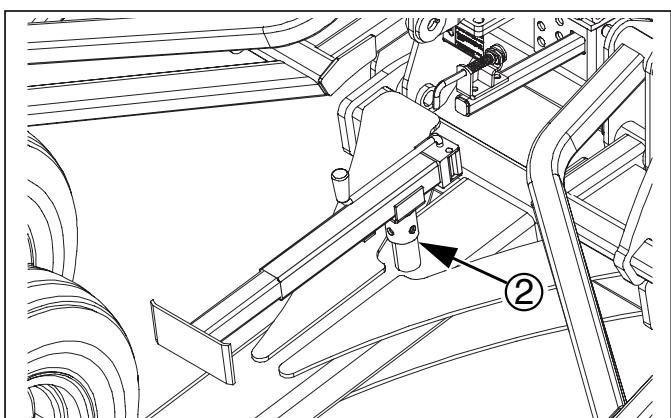


Figure 4  
Jack in Storage

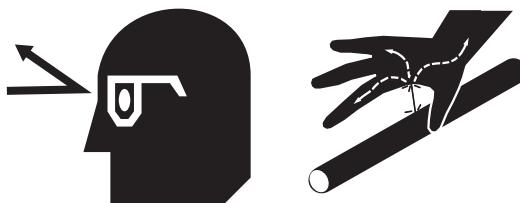
43539

## Hydraulic Hose Hookup



### **High Pressure Fluid Hazard:**

Relieve pressure before disconnecting hydraulic lines. Escaping fluid under pressure can have sufficient pressure to penetrate the skin causing serious injury. Use a piece of paper or cardboard, NOT BODY PARTS, to check for leaks. Wear protective gloves and safety glasses or goggles when working with hydraulic systems. If an accident occurs, seek immediate medical attention from a physician familiar with this type of injury.



### **Refer to Figure 5**

Great Plains hydraulic hoses have color coded handle grips to help you hookup hoses to your tractor outlets. Hoses that go to the same remote valve are marked with the same color.

### **Color Coded Hose Handles**

Color	Hydraulic Function
Black	Lift (2 hoses)
Green	Fold (2 hoses)
Yellow	Auxiliary (Optional)

To distinguish hoses on the same hydraulic circuit, refer to the symbol molded into the handle grip. Hoses with an extended-cylinder symbol feed cylinder base ends. Hoses with a retracted-cylinder symbol feed cylinder rod ends.

Connect fold hoses to suitable tractor remote valves.

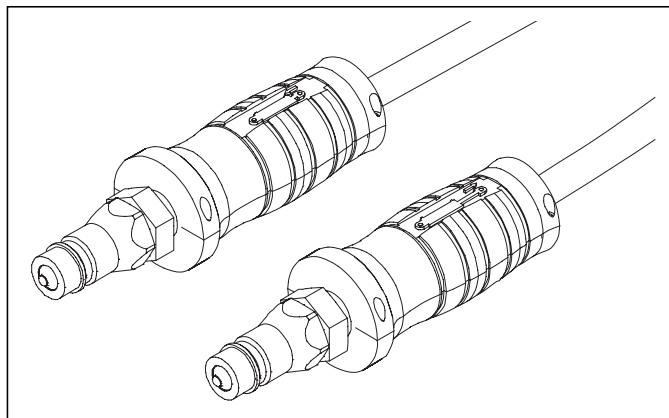


Figure 5  
Color Coded Hose Handles

31733

## Electrical Hookup

Plug implement electrical lead in tractor seven-pin connector. If your tractor is not equipped with a seven-pin connector, contact your dealer for installation.

Plug in any optional connectors or aftermarket connectors, such as an implement-mounted GPS receiver. For future reference, note any optional connectors on this checklist.

- ① Lighting connector (standard)
- \_\_\_\_\_
- \_\_\_\_\_



Figure 6  
Lighting Connector

36051

## First Time Field Adjustments

### Center and Wing Leveling

7. Pre-leveling of machine can be done on a concrete slab or level surface. Lower machine so sweeps on the center frame are 1-2" off the ground.

### Wing Leveling (3 or 5 Section Wings)

*Refer to Figure 7*

8. Set the 3-section and the 5-section inner and outer wings to match the depth of the center. This is done by adjusting the rear wing turnbuckle ① on each wing. Start by loosening the jam nut ②, then adjust the turnbuckle ①. Lengthen the turnbuckle tube to run deeper and shorten the turnbuckle to run shallower.
9. Tighten the jam nut ②, back against the turnbuckle tube to hold the adjustments in place.

Note: 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.

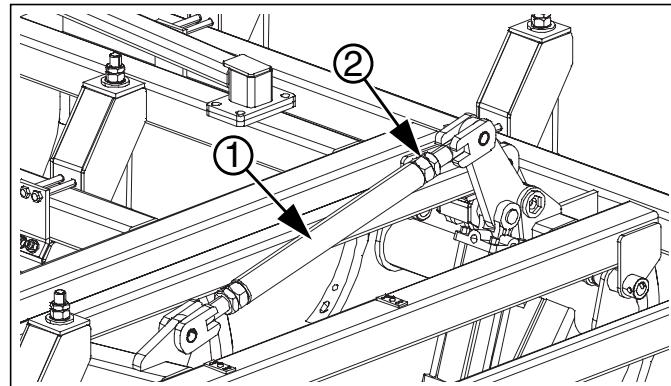


Figure 7  
Wing Level

43541

### Center and Wing Gauge Wheel Adjustments

*Refer to Figure 8*

10. Loosen the jam nut ③ and adjust turnbuckle on the gauge wheels 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.
11. Retighten the jam nut ③.

Repeat same procedure for the other side of the center frame.

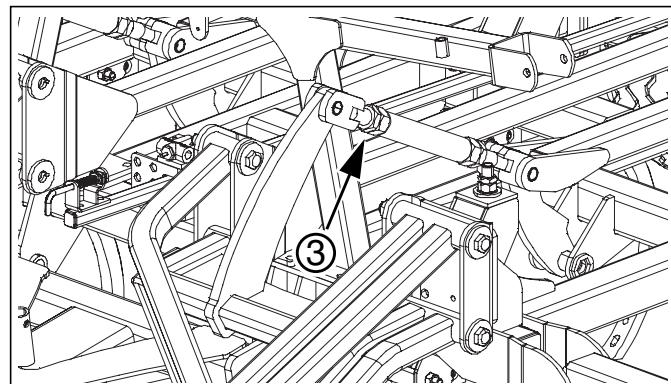


Figure 8  
Wing Level

43541



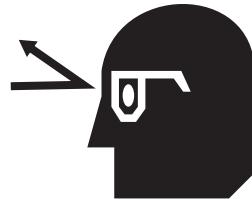
# Operating Instructions

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.

## Pre-Start Checklist

Perform the following steps before transporting the 6000 Series Ultra Chisel to the field.

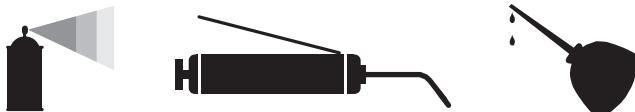
- Carefully read "**Important Safety Information**" on page 1.
  - Lubricate implement as indicated under "**Lubrication**" on page 25.
  - Check all tires for proper inflation. See "**Specifications and Capacities**" on page 26.
  - Check all bolts, pins, and fasteners. Torque as shown in "**Torque Values Chart**" on page 27.
  - Check implement for worn or damaged parts. Repair or replace parts before going to the field.
  - Check hydraulic hoses, fittings, and cylinders for leaks. Repair or replace before going to the field.
  - Perform all beginning-of-season and daily service items under "**Maintenance**" on page 24.
12. Wait for both wings to reach the fully folded position.  
Set tractor remote(s) to Neutral to hold at folded.



### **WARNING**

#### **High Pressure Fluid Hazard:**

*Relieve pressure before disconnecting hydraulic lines. Use a piece of paper or cardboard, NOT BODY PARTS, to check for leaks. Wear protective gloves and safety glasses or goggles when working with hydraulic systems. Escaping fluid under pressure can have sufficient pressure to penetrate the skin causing serious injury. If an accident occurs, seek immediate medical assistance from a physician familiar with this type of injury.*



## Unfolding

Unfold the implement for adjustments, field operations, maintenance, parking and storage.

1. Unless the implement was folded, with the currently hitched tractor, only a short time ago, check for evidence of oil leaks. Check the ground at hitch connections, hose fittings and under cylinders.

### **WARNING**

#### ***Crushing Hazard:***

*Bystanders could be crushed under the wings or caught in the wing fold mechanisms. To avoid serious injury or death, keep all persons well away during implement unfold.*

2. Be aware of vertical and horizontal clearances needed to unfold the implement.
3. Remove Wing Pins.
4. Put tractor in Park with parking brake engaged.
5. Clear all persons from on or near the implement.
6. Slowly move fold circuit lever to Extend. Observe the unfold operation.
7. Wait for both wings to reach the fully unfolded position. Set tractor remote to Neutral to lock at unfolded.

## Folding

Fold the implement for movements on public roads and between fields with narrow clearances.

### **DANGER**

#### ***Electrocution Hazard:***

*Avoid overhead lines when folding and transporting. When folded and lifted, the implement requires clearance of at least 14ft (4.3m) for Models 6324 -6329 and 17ft (5.2m) for Models 6330 & 6333, which is high enough to contact low-hanging lines. Touching the implement or tractor completes a circuit to ground, and can result in serious injury or death. At higher voltages, shock can occur without direct contact.*

1. Hitch tractor (page 13).
2. Move to level ground. Be aware of vertical clearance needed to fold implement.
3. Put tractor in Park with parking brake engaged.
4. Clear all persons from on or near the implement
5. Slowly move fold circuit lever to Retract. Observe the fold operation.
6. Wait for both wings to reach the fully folded position. Set tractor remote to Neutral to hold at folded.
7. Install Wing Pins.

### **WARNING**

#### ***Crushing Hazard:***

*Bystanders could be crushed between the folding implement wings and the implement center frame, or caught in the folding mechanism. To avoid serious injury or death, keep all bystanders well away during implement operation.*

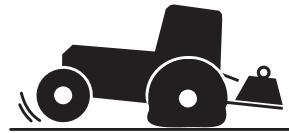
## Transporting the Ultra Chisel

See “[Hitching Tractor to Implement](#)” on page 13 before transporting the Ultra Chisel.

### DANGER

#### *Loss of Control Hazard:*

Ensure that the towing vehicle is adequate for the task. Using an inadequate tow vehicle is extremely unsafe, and can result in loss of control, serious injury and death. To reduce the hazard, use only a towing vehicle that is both rated for the implement load, and properly ballasted for the load.



### DANGER

#### *Electrocution Hazard:*

Avoid overhead lines transporting. When folded and lifted, the implement requires clearance of 14 to 16ft (4.3 m-5.2m), which is high enough to contact low-hanging lines. Touching the implement or tractor completes a circuit to ground, and can result in serious injury or death. At higher voltages, shock can occur without direct contact.



### CAUTION

#### *Braking and Loss of Control Hazard:*

Do not exceed 20 mph (32 km/h) when driving straight.

Do not exceed 13 mph (21 km/h) in turns. The weight of the implement can cause under-steer, and the height of the implement is a tipping hazard.

## Check Tractor Capacity and Configuration

- Consult your tractor manual for limitations.
- Add weights to tractor as required.

When determining the weight of your Ultra Chisel, be sure to include the weight of any options.

## Transport Checklist

Before transporting the implement check the following items.

- Plan the route. Avoid steep hills. Keep Clearances in mind.
- Transport only with a tractor of proper size and adequate ballast. See “[Specifications and Capacities](#)” on page 26.
- Hitch implement securely to tractor. Make all electrical and hydraulic connections. See “[Hitching Tractor to Implement](#)” on page 13.
- Fold Implement and install wing pins.
- Raise Ultra Chisel.
- Be sure all transport locks are installed.
- Always have lights on for highway operation.
- Comply with all national, regional and local safety laws when traveling on public roads.
- Travel with caution. Allow safe clearance. Remember that the Ultra Chisel is wider than the tractor.

## General Operation and In-Field Adjustments

8. Remove the transport pins and unfold machine. Make sure the fold cylinders are fully extended to allow the wings to fully flex in the field.
9. 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 gauge wheels. Never run the machine with the back lower (deeper) than the front. To adjust the machine from side to side, use the turnbuckle on each wing. See "**First Time Field Adjustments**" on page 15.
10. The ideal working speed for the Ultra Chisel is 5 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.
11. The Ultra Chisel is designed as a primary tillage tool. For best results, if at all possible, run the machine at a slight angle of the rows. This will improve trash flow and help spread the residue more evenly throughout the field.
12. When you have the machine set to the desired working depth, set the depth stop assembly on the depth control bar. This is located at the front of the machine on the brace bar.
13. Screw the depth stop in to run shallower. Screw the depth stop out to run deeper. 1 turn = 1/4" working depth. This will maintain a constant depth each time after raising and lowering the machine.
14. 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 the problem persists, contact the factory service representative for the possible adjustments. Do not adjust the rebound valve without first contacting the factory service rep.
15. Adjust the drag to leave the desired results while maintaining the trash flow through the drag.
16. At time of delivery the spring is compressed to 12" from the top of the cup washer to the top plate of shank upright.



Figure 9  
Depth Stop

43544

## Field Operations

### NOTICE

#### *Equipment Damage Risk:*

*Lift for tight turns and reverse moves. Tight turns can result in a section moving backward. Never back up with the Ultra Chisel in the ground.*

### Field Set-Up Checklists

Use the following tables to develop a final checklist for your tractor/Ultra Chisel configuration. Additional or fewer steps may be necessary depending on tractor features, Ultra Chisel options and planting accessories.

#### Mechanical Checklist (Tractor Hitching)

- Ultra Chisel hitched
- Hitch pin locked.
- Safety chain secured to tractor or leading implement.
- Parking jack stowed

#### Electrical Checklist

- Verify electrical hookups solid, or connector securely stowed if not using lights in field.

### Operations Checklists

#### Hitching

- Match hitch Category to tractor (page 13).
- Hookup hydraulic hoses (page 14).
- Hookup electrical connections (page 14).

#### Field Start

- Remove wing pins.
- Unfold the implement (page 17).
- Check levels (page 15).

#### Field Turns

- Raise implement completely.
- Make turn.
- Lower to field depth.

#### Hydraulic System Checklist

- Check tractor hydraulic reservoir full
- Make hydraulic connections
- Inspect connections for leaks
- Unfold Implement

#### End Field Work

- Lift implement.
- Fold implement.
- Install wing pins and transport locks.
- Travel with caution (page 18).

## Rear Attachment Settings

### Spike Drag Settings

*Refer to Figure 10*

1. 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 of the hang chains. If so, shorten pull chains

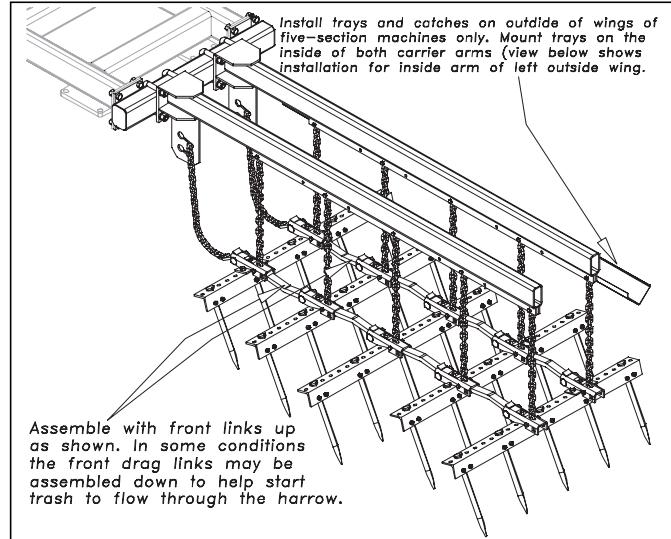


Figure 10  
Spike Drag Settings

41235

### Heavy Coil Tine Settings

*Refer to Figure 11*

2. To adjust down pressure loosen the jam nut ①, and screw the spring bolt ②, in to put more down pressure on the drag, or adjust the bolt out to have less down pressure. Retighten the jam nut ①, to secure your adjustments. The spring will be pre-set to 3 -3½" of bolt left to adjust.
3. To change angle of coil tine, rotate the locking pin ③ and move the adjustment lever ④ forward or backwards. Moving the lever towards the rear of the machine makes the drag more aggressive. Moving the lever towards the front of the machine will allow residue to flow through the drag easier. The adjustment lever has 4 positions and will change the coil tines several degrees.
4. Rotate the locking pin ③, back to its engaged position when the desired angle is set.

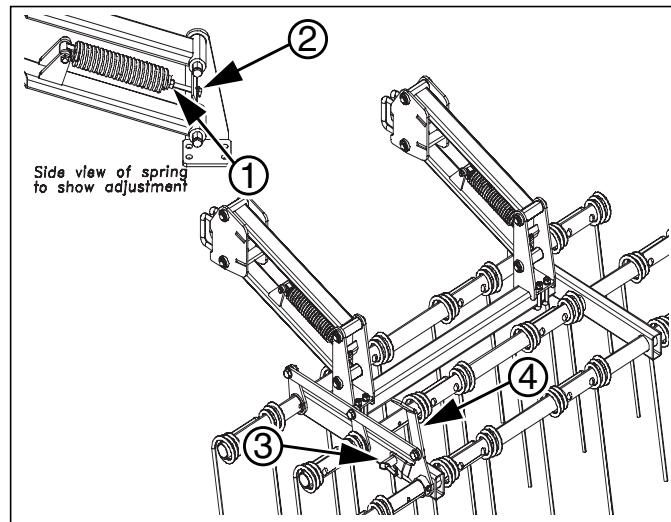


Figure 11  
Heavy Coil Tine Adjustment Lever

43422

## Reel Settings

### Refer to Figure 12

5. If a reel is added, adjust the amount of down pressure by either shortening the spring for less pressure or lengthening for more pressure.
6. Adjust nut ① to where spring ② is just making contact with front plate ③.
7. Turn nut ① another 1" further on spring rod ④ to set pre-load on spring ②.

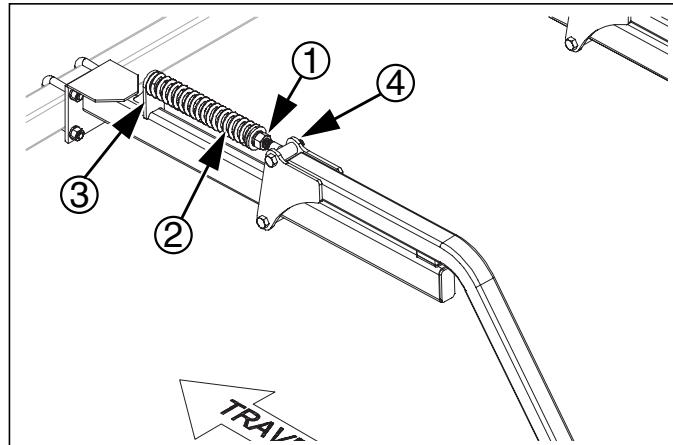


Figure 12  
Reel Arm Adjustments

43542

### Refer to Figure 13

8. The bars on the reels are angled forward ⑤ and should be installed as such on the machine. In some conditions in which a firming of the soil is more desirable than breaking up clods then these reels can be mounted in reverse ⑥. This does however increase the chance of causing damage to the bars in rocky soil.

### **WARNING**

*Be sure reels are installed with twisted bars oriented forward ④ as shown. Mounting in reverse ⑤ can damage reel in rocky soil.*

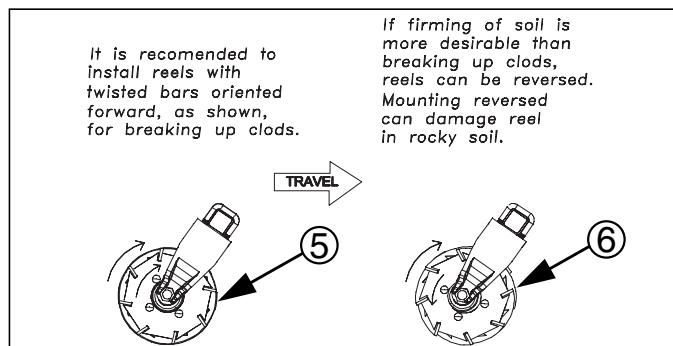


Figure 13  
Reel Direction

42284

## Parking

For long-term parking, see also “**Storage**” below.

1. Choose a parking location that is level, has firm soil and is unlikely to develop soft soil in rain. With the implement still hitched, maneuver it to the parking location.
2. Lower the implement to just above ground. Shut off the tractor and remove the key.
3. Unplug implement hydraulic hoses and electrical lines from tractor.
4. Unhook the safety chain.
5. Remove the hitch pin.

## Storage

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

1. Thoroughly clean implement.
2. Park the implement at the storage location as per “**Parking**” above.
3. Lubricate areas noted under “**Lubrication**” beginning on page 25. Apply heavy grease to exposed cylinder rods.
4. Inspect implement for worn or damaged parts. Make repairs and service during the off season.
5. Use spray paint to cover scratches, chips and worn areas on the implement to protect the metal.
6. Cover with a tarp if stored outside.

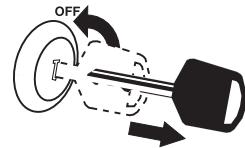


# Maintenance and Lubrication

## 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**

#### ***Crushing Hazard:***

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



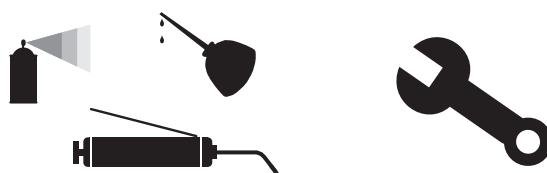
### **WARNING**

#### ***High Pressure Fluid Hazard:***

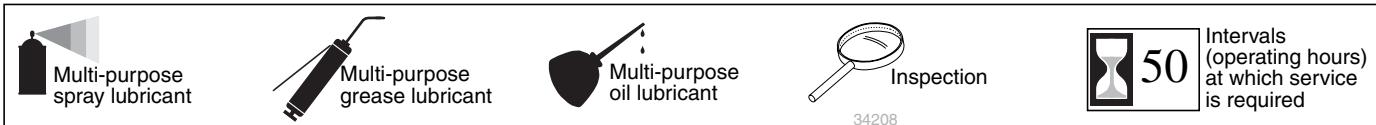
*Check all hydraulic lines and fittings before applying pressure. Fluid escaping from a very small hole can be almost invisible. Use paper or cardboard, not body parts, and wear heavy gloves to check for suspected leaks. Escaping fluid under pressure can have sufficient pressure to penetrate the skin. If an accident occurs, seek immediate medical assistance from a physician familiar with this type of injury.*



1. After using your implement for several hours, check all bolts to be sure they are tight.
2. Clean implement on a regular basis. Regular and thorough cleaning will lengthen equipment life and reduce maintenance and repair.
3. Lubricate areas listed under “**Lubrication**” on page 25.
4. Replace any worn, damaged, or illegible safety labels by obtaining new labels from your Great Plains dealer.



## Lubrication

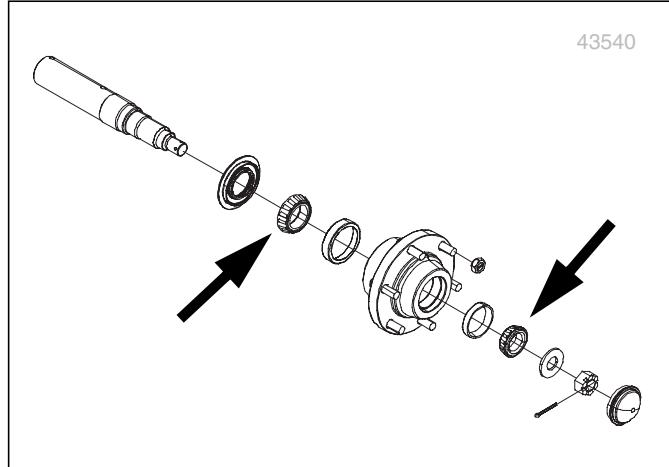


### Wheel Bearing Hubs



Inspect bearings for end play Annually. If excessive endplay exists it is recommended to disassemble, clean and repack the wheel bearings.

For machines stored outdoors or operating in extreme conditions bearings should be checked more often.



34208

43540

### All Turnbuckles and Threaded Adjustments



Overall Machine Maintenance;

Type of Lubrication: Multipurpose Lubricant  
Quantity: Coat thoroughly.



## Appendix A - Reference Information

### Specifications and Capacities

Model No.	6321UC	6324UC	6327UC
Tillage Width (9" Spacing)	21' 9" (6.63m)	24' 9" (7.54m)	27' 9" (8.46m)
Tillage Width (12" Spacing)	21' 9" (6.63m)	23' 9" (7.24m)	27' 9" (8.46m)
Number of Shanks 9" Spacing	29	33	37
Number of Shanks 12" Spacing	22	24	28
Under Frame Clearance	30"	30"	30"
Maximum Working Depth	8"	8"	8"
Transport Width	13' 8"	13' 8"	13' 8"
Transport Height (9" Spacing)	10' 10"	12' 4"	13' 10"
Transport Height (12" Spacing)	10' 10"	11' 10"	13' 10"
Tire - Transport	340/60R16.5	340/60R16.5	340/60R16.5
Tire - Wing	12.5L x 15	12.5L x 15	12.5L x 15
Tire - Gauge Wheel	9.5L x 15	9.5L x 15	11L x 15
Horsepower (PTO Req/Min)	190-220	200-250	240-290
Kilowatt	142-165	149-187	179-216
Model No.	6329UC	6530UC	6533UC
Tillage Width (9" Spacing)	29' 3" (8.91m)	30' 9" (9.37m)	33' 9" (10.29m)
Tillage Width (7 1/2" Spacing)	29' 9" (9.07m)	30' 9" (9.37m)	32' 9" (9.98m)
Number of Shanks 9" Spacing	39	41	45
Number of Blades 12" Spacing	30	32	34
Under Frame Clearance	30"	30"	30"
Maximum Working Depth	8"	8"	8"
Transport Width	13' 8"	16' 8"	16' 8"
Transport Height (9" Spacing)	14' 7"	13' 10"	15' 4"
Transport Height (12" Spacing)	14' 10"	13' 10"	14' 10"
Tire - Transport	340/60R15.5	380/55R16.5	380/55R16.5
Tire - Wing	12.5L x 15	12.5L x 15	12.5L x 15
Tire - Gauge Wheel	11L x 15	11L x 15	11L x 15
Horsepower (PTO Req/Min)	250-325	250-350	325-450
Kilowatt	188-243	187-241	242-336

## Tire Inflation Chart

Wheel	Tire Size	Inflation
Wing	12.5L x 15 12-Ply RI	52 psi (358 kPa)
Transport	340/60 R 16.5	73 psi (503 kPa)
Transport	380/55 R 16.5	73 psi (503 kPa)
Gauge Wheel	11L x 15 12-Ply RI	52 psi (358 kPa)

## Tire Warranty Information

All tires are warranted by the original manufacturer of the tire. Tire warranty information is found in the brochures included with your Operator's and Parts Manuals or online at the manufacturer's web sites listed below. For assistance or information, contact your nearest Authorized Farm Tire Retailer.

Manufacturer	Web site
Firestone	<a href="http://www.firestoneag.com">www.firestoneag.com</a>
Gleason	<a href="http://www.gleasonwheel.com">www.gleasonwheel.com</a>
Titan	<a href="http://www.titan-intl.com">www.titan-intl.com</a>
Galaxy	<a href="http://www.atgtire.com">www.atgtire.com</a>
BKT	<a href="http://www.bkt-tire.com">www.bkt-tire.com</a>

## Torque Values Chart

Bolt Size	Bolt Head Identification					
in-tpi <sup>a</sup>	N-m <sup>b</sup>	ft-lb <sup>d</sup>	N-m	ft-lb	N-m	ft-lb
1/4-20	7.4	5.6	11	8	16	12
1/4-28	8.5	6	13	10	18	14
5/16-18	15	11	24	17	33	25
5/16-24	17	13	26	19	37	27
3/8-16	27	20	42	31	59	44
3/8-24	31	22	47	35	67	49
7/16-14	43	32	67	49	95	70
7/16-20	49	36	75	55	105	78
1/2-13	66	49	105	76	145	105
1/2-20	75	55	115	85	165	120
9/16-12	95	70	150	110	210	155
9/16-18	105	79	165	120	235	170
5/8-11	130	97	205	150	285	210
5/8-18	150	110	230	170	325	240
3/4-10	235	170	360	265	510	375
3/4-16	260	190	405	295	570	420
7/8-9	225	165	585	430	820	605
7/8-14	250	185	640	475	905	670
1-8	340	250	875	645	1230	910
1-12	370	275	955	705	1350	995
1 1/8-7	480	355	1080	795	1750	1290
1 1/8-12	540	395	1210	890	1960	1440
1 1/4-7	680	500	1520	1120	2460	1820
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

Bolt Size	Bolt Head Identification					
mm x pitch <sup>c</sup>	N-m	ft-lb	N-m	ft-lb	N-m	ft-lb
M 5 X 0.8	4	3	6	5	9	7
M 6 X 1	7	5	11	8	15	11
M 8 X 1.25	17	12	26	19	36	27
M 8 X 1	18	13	28	21	39	29
M 10 X 1.5	33	24	52	39	72	53
M 10 X 0.75	39	29	61	45	85	62
M 12 X 1.75	58	42	91	67	125	93
M 12 X 1.5	60	44	95	70	130	97
M 12 X 1	90	66	105	77	145	105
M 14 X 2	92	68	145	105	200	150
M 14 X 1.5	99	73	155	115	215	160
M 16 X 2	145	105	225	165	315	230
M 16 X 1.5	155	115	240	180	335	245
M 18 X 2.5	195	145	310	230	405	300
M 18 X 1.5	220	165	350	260	485	355
M 20 X 2.5	280	205	440	325	610	450
M 20 X 1.5	310	230	650	480	900	665
M 24 X 3	480	355	760	560	1050	780
M 24 X 2	525	390	830	610	1150	845
M 30 X 3.5	960	705	1510	1120	2100	1550
M 30 X 2	1060	785	1680	1240	2320	1710
M 36 X 3.5	1730	1270	2650	1950	3660	2700
M 36 X 2	1880	1380	2960	2190	4100	3220

a. in-tpi = nominal thread diameter in inches-threads per inch

b. N·m = newton-meters

c. mm x pitch = nominal thread diameter in mm x thread pitch

d. ft-lb = foot pounds

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

25199

## 1-Year Limited 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. 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. 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. Soils containing rocks, stumps or obstructions may void the warranty in its entirety.

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.

Warranty does not cover damage caused by acts of God or accidents.

Warranty does not cover units with excess use or units used to custom farm.



# Index

<b>A</b>	
address, Great Plains .....	11
amber reflectors .....	6
<b>C</b>	
capacities .....	26
CAUTION, defined .....	1
chain .....	13
chain routing .....	27
check for leaks .....	14
checklists .....	20
electrical .....	14, 20
hydraulic system .....	20
mechanical	
implement .....	20
pre-setup .....	12
pre-start .....	16
transport .....	18
children .....	2
color code, hose handle .....	14
connectors	
electrical .....	14
contact Great Plains .....	11
covered models .....	10
customer service .....	11
cylinder symbols .....	14
<b>D</b>	
DANGER, defined .....	1
daytime reflectors .....	6
decal replacement .....	5
decals	
caution	
general instructions .....	9
danger	
electrocution .....	7
hitch crush .....	6
warning	
high pressure fluid hazard .....	7
pinching crushing .....	8
pinch/crush .....	7
decal, safety .....	5
definitions .....	10
directions .....	10
disconnecting hydraulic lines .....	14
<b>E</b>	
electrocution .....	3, 7, 17
email, Great Plains .....	11
<b>F</b>	
fire .....	1
folding .....	17
<b>G</b>	
gray, hose handle .....	14
green, hose handle .....	14
<b>H</b>	
headphones .....	2
high pressure fluid .....	7
high pressure fluids .....	2
hills .....	13
hitching .....	13
hose color code .....	14
hoses, hydraulic .....	14
hydraulic hookup .....	14
hydraulic safety .....	2
<b>I</b>	
implement .....	10
inflation .....	27
intended usage .....	10
<b>L</b>	
LC40 .....	10
leak checks .....	14
Leaks .....	2
left-hand, defined .....	10
leveling .....	15
level, wings .....	15
lighting .....	14
lights .....	2
lubrication .....	25
<b>M</b>	
maintenance .....	24
maintenance safety .....	4
medical assistance .....	2, 16, 24
model number .....	11
models covered .....	10
<b>N</b>	
Notice Decals .....	8
NOTICE, defined .....	10
<b>O</b>	
orientation rose .....	10
overhead lines .....	3
owner assistance .....	11
<b>P</b>	
phone number, GP .....	11
protective equipment .....	2
<b>R</b>	
red reflectors .....	5
reel .....	22
reflectors	
amber .....	6
daytime .....	6
red .....	5
SMV .....	5
reflectors, safety .....	5
repair parts .....	11
riders .....	2
right-hand, defined .....	10
rose, orientation .....	10
<b>S</b>	
safety chain .....	13
safety decal .....	5
safety information .....	1
safety symbol .....	1
serial number .....	11
setup .....	12
shutdown .....	3
slopes .....	13
SMV (Slow Moving Vehicle) .....	5
specifications .....	26
speed limits, transport .....	18
spike drag .....	21
storage .....	3
support .....	11
symbol, safety .....	1
<b>T</b>	
tables	
covered models .....	10
hose color code .....	14
tire inflation .....	27
tires .....	27
tire inflation .....	27
torque .....	27
towing vehicle capability .....	18
transport .....	18
transport speed .....	3
transporting .....	18
<b>U</b>	
unfolding .....	17
URLs, tires .....	27
<b>V</b>	
vertical clearance .....	3, 17, 18
<b>W</b>	
WARNING, defined .....	1
warranty .....	28
warranty, tire .....	27
welding .....	4
www .....	27
<b>Numerics</b>	
12.5Lx15 SL .....	27
20 mph .....	3
2013- .....	14
2014+ .....	14
30x8.8x15 .....	27
32 km/h .....	3
560-484Q, manual .....	10
591-049M, manual .....	10
591-049P, manual .....	10
818-045C, decal .....	7
818-055C, reflector .....	5
818-339C, decal .....	7
818-579C, decal .....	8
818-590C, decal .....	6
838-265C, reflector .....	6
838-266C, reflector .....	5
838-267C, reflector .....	6
838-598C, decal .....	9
838-599C, decal .....	7
838-613C, decal .....	8





